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WHY: To provide the public with access to information necessary to research Federal agency regulations which directly affect them. There will be no discussion of specific agency regulations.

WHEN: Tuesday, April 10, 2012
9 a.m.–12:30 p.m.

WHERE: Office of the Federal Register
Conference Room, Suite 700
800 North Capitol Street, NW.
Washington, DC 20002

RESERVATIONS: (202) 741–6008

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Presidential Documents

Title 3—

The President

Proclamation 8780 of March 1, 2012

Women's History Month, 2012

By the President of the United States of America

A Proclamation

[**Editorial Note:** Proclamation 8780, originally published on pages 13185–13186 in the **Federal Register** of Tuesday, March 6, 2012, is being reprinted with a White House correction.]

As Americans, ours is a legacy of bold independence and passionate belief in fairness and justice for all. For generations, this intrepid spirit has driven women pioneers to challenge injustices and shatter ceilings in pursuit of full and enduring equality. During Women's History Month, we commemorate their struggles, celebrate centuries of progress, and reaffirm our steadfast commitment to the rights, security, and dignity of women in America and around the world.

We see the arc of the American story in the dynamic women who shaped our present and the groundbreaking girls who will steer our future. Fifty-one years ago, when former First Lady Eleanor Roosevelt confronted President John F. Kennedy about the lack of women in government, he appointed her the head of a commission to address the status of women in America and the discrimination they routinely faced. Though the former First Lady passed away before the commission finished its work, its report would spur action across our country and galvanize a movement toward true gender parity. Our Nation stands stronger for that righteous struggle, and last March my Administration was proud to release the first comprehensive Federal report on the status of American women since President Kennedy's commission in 1963. Today, women serve as leaders throughout industry, civil society, and government, and their outstanding achievements affirm to our daughters and sons that no dream is beyond their reach.

While we have made great strides toward equality, we cannot rest until our mothers, sisters, and daughters assume their rightful place as full participants in a secure, prosperous, and just society. With the leadership of the White House Council on Women and Girls, my Administration is advancing gender equality by promoting workplace flexibility, striving to bring more women into math and science professions, and fighting for equal pay for equal work. We are combating violence against women by revising an antiquated definition of rape and harnessing the latest technology to prevent dating violence, domestic violence, and sexual assault. From securing women's health and safety to leveling the playing field and ensuring women have full and fair access to opportunity in the 21st century, we are making deep and lasting investments in the future of all Americans.

Because the peace and security of nations around the globe depend upon the education and advancement of women and girls, my Administration has placed their perspectives and needs at the heart of our foreign policy. Last December, I released the first United States National Action Plan on Women, Peace, and Security to help ensure women play an equal role in peace-building worldwide. By fully integrating women's voices into peace processes and our work to prevent conflict, protect civilians, and deliver humanitarian assistance, the United States is bringing effective support to women in areas of conflict and improving the chances for lasting peace. In the months ahead, my Administration will continue to collaborate with

domestic and international partners on new initiatives to bring economic and political opportunity to women at home and abroad.

During Women's History Month, we recall that the pioneering legacy of our grandmothers and great-grandmothers is revealed not only in our museums and history books, but also in the fierce determination and limitless potential of our daughters and granddaughters. As we make headway on the crucial issues of our time, let the courageous vision championed by women of past generations inspire us to defend the dreams and opportunities of those to come.

NOW, THEREFORE, I, BARACK OBAMA, President of the United States of America, by virtue of the authority vested in me by the Constitution and the laws of the United States, do hereby proclaim March 2012 as Women's History Month. I call upon all Americans to observe this month and to celebrate International Women's Day on March 8, 2012, with appropriate programs, ceremonies, and activities that honor the history, accomplishments, and contributions of American women. I also invite all Americans to visit www.WomensHistoryMonth.gov to learn more about the generations of women who have shaped our history.

IN WITNESS WHEREOF, I have hereunto set my hand this first day of March, in the year of our Lord two thousand twelve, and of the Independence of the United States of America the two hundred and thirty-sixth.

[FR Doc. 2012–7295
Filed 3–23–12; 8:45 am]
Billing code 3295–F2–P

Rules and Regulations

Federal Register
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Monday, March 26, 2012

This section of the FEDERAL REGISTER contains regulatory documents having general applicability and legal effect, most of which are keyed to and codified in the Code of Federal Regulations, which is published under 50 titles pursuant to 44 U.S.C. 1510.

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 23

[Docket No. FAA–2011–1387; Special Conditions No. 23–256–SC]

Special Conditions: XtremeAir GmbH, XA42; Acrobatic Category Aerodynamic Stability

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final special conditions.

SUMMARY: These special conditions are issued for the XtremeAir GmbH XA42 airplane. The XA42 airplane has a novel or unusual design feature associated with its static stability. This airplane can perform at the highest level of aerobatic competition. To be competitive, the aircraft was designed with positive and, at some points, neutral stability within its flight envelope. Its lateral and directional axes are also decoupled from each other providing more precise maneuvering. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for these design features. These special conditions contain the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards. These special conditions are only applicable to aircraft certified solely in the acrobatic category.

DATES: *Effective Date:* April 25, 2012.

FOR FURTHER INFORMATION CONTACT: Mr. Ross Schaller, Federal Aviation Administration, Small Airplane Directorate, Aircraft Certification Service, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone (816) 329–4162; facsimile (816) 329–4090.

SUPPLEMENTARY INFORMATION:

Background

On May 3, 2011, XtremeAir GmbH applied for a type certificate for their new model XA42. The XA42 is certified under EASA authority as a dual category (acrobatic/utility) airplane. It has a two-place tandem canopy cockpit and a single-engine. It also features a conventional landing gear, conventional low-wing planform and is of composite construction. The engine is a Lycoming AEIO–580–B1A with a rated power of 315 Hp at 2,700 rpm. The airplane is proposed to be approved for Day-VFR operations with no icing approval.

The maximum takeoff weight is 2,200 pounds in utility category, 1,874 pounds in acrobatic category. V_{NE} is 225 knots, V_{NO} is 185 knots and V_A is 174 knots, indicated airspeed. Maximum altitude is 15,000 feet.

Acrobatic airplanes previously type certificated by the FAA did comply with the stability provisions of Subpart B of 14 CFR part 23. However, airplanes like the XA42 are considered as ''unlimited'' acrobatic aircraft because they can perform at the highest level of aerobatic competition and can perform any of the maneuvers listed in the Aresti Catalog. Generally, the evolution of the ''unlimited'' types of acrobatic airplanes, with very low mass, exceptional roll rates and very high G capabilities, in addition to power to mass ratios that are unique to this type of airplane, have led to airplanes that cannot comply with the stability provisions of the regulations. These airplanes can still be type-certificated, but in the acrobatic category only and with an appropriate set of special conditions and associated limitations.

The FAA will only consider certifying the XA42 in the acrobatic category. XtremeAir GmbH will not be able to offer a utility category operating envelope to accommodate the increased fuel load designed for cross-country operations. The FAA does recognize that fuel exhaustion is one of the top accident causes associated with this class of aircraft. For this reason, the FAA allows XtremeAir to seek certification of a limited acrobatic envelope at a higher weight that will still meet the minimum load requirements of +6/-3 g associated with 14 CFR, part 23, § 23.337. The XA42 airplane would be approved for unlimited maneuvers at or below its designed unlimited acrobatic weight. The airplane would also be approved at some higher weight (for fuel) that would still meet the requirements of § 23.337 for acrobatic category and may have restrictions on the maneuvers allowed.

Type Certification Basis

Under the provisions of 14 CFR, part 21, § 21.17, XtremeAir GmbH must show that the XA42 meets the applicable provisions of part 23, as amended by Amendments 23–1 through 23–59 thereto.

Part 36 of Title 14 of the Code of Federal Regulations, effective December 1, 1969, as amended by Amendments 36–1 through 36–28.

Not approved for ditching; compliance with provisions for ditching equipment in accordance with 14 CFR 23.1415(a)(b) has not been demonstrated.

Approved for VFR-day only. Flight in known icing prohibited.

If the Administrator finds that the applicable airworthiness regulations (i.e., 14 CFR part 23) do not contain adequate or appropriate safety standards for the XA42 because of a novel or unusual design feature, special conditions are prescribed under the provisions of § 21.16.

In addition to the applicable airworthiness regulations and special conditions, the XA42 must comply with the fuel vent and exhaust emission requirements of 14 CFR part 34 and the noise certification requirements of 14 CFR part 36 and the FAA must issue a finding of regulatory adequacy pursuant to section 611 of Public Law 92–574, the ''Noise Control Act of 1972.''

Special conditions, as defined in § 11.19, are issued in accordance with § 11.38 and become part of the type certification basis in accordance with § 21.17(a)(2).

Special conditions are initially applicable to the model for which they are issued. Should the type certificate for that model be amended later to include any other model that incorporates the same novel or unusual design feature, the special conditions would also apply to the other model under the provisions of § 21.101.

Novel or Unusual Design Features

The XtremeAir GmbH XA42 will incorporate the following novel or unusual design features:

For acrobatic category airplanes with unlimited acrobatic capability:

Neutral longitudinal and lateral static stability characteristics.

Discussion

The Code of Federal Regulations states static stability criteria for longitudinal, lateral, and directional axes of an airplane. However, none of these criteria are adequate to address the specific issues raised in the flight characteristics of an unlimited aerobatic airplane. Therefore, the FAA has determined after a flight test evaluation that, in addition to the requirements of part 21 and part 23, special conditions are needed to address these static stability characteristics.

Accordingly, these special conditions are for the XtremeAir GmbH XA42 static stability characteristics to be certified solely as an acrobatic category airplane. Other conditions may be developed, as needed, based on further FAA review and discussions with the manufacturer and civil aviation authorities.

Discussion of Comments

A notice of proposed special conditions No. 23–11–02–SC for the XtremeAir GmbH XA42 airplanes was published in the **Federal Register** on December 27, 2011 (76 FR 80829). One comment was received; however, it appeared to be made in error. It discussed new hire training through approved 142 training centers, which is not relevant to the acrobatic category aerodynamic stability special conditions being imposed on XtremeAir GmbH's XA42 airplane. For this reason, no further action will be taken and the special conditions are adopted as proposed.

Applicability

As discussed above, these special conditions are applicable to the XA42. Should XtremeAir GmbH apply at a later date for a change to the type certificate to include another model on the same type certificate incorporating the same novel or unusual design feature, the special conditions would apply to that model as well.

Conclusion

This action affects only certain novel or unusual design features on one model of airplane. It is not a rule of general applicability and it affects only the applicant who applied to the FAA for approval of these features on the airplane.

List of Subjects in 14 CFR Part 23

Aircraft, Aviation safety, Signs and symbols.

Citation

■ The authority citation for these special conditions is as follows:

Authority: 49 U.S.C. 106(g), 40113 and 44701; 14 CFR 21.16 and 21.17; and 14 CFR 11.38 and 11.19.

The Special Conditions

Accordingly, pursuant to the authority delegated to me by the Administrator, the following special conditions are issued as part of the type certification basis for XtremeAir GmbH XA42 airplanes.

1. Unlimited Acrobatic-Only Category Static Stability Requirements

For unlimited, acrobatic-only category aircraft, XtremeAir GmbH XA42 will comply with the following stability special conditions in lieu of the existing §§ 23.171, 23.173, 23.175, and 23.177:

(A) In place of 14 CFR part 23, § 23.171 Flight—General (stability) requirement, comply with the following:

SC23.171 Flight—General: The airplane must be neutrally or positively stable in the longitudinal, directional, and lateral axes under sections SC23.173 through SC23.181. In addition, the airplane must show suitable stability and control ''feel'' (static stability) in any condition normally encountered in service, if flight tests show it is necessary for safe operation.

(B) In place of 14 CFR part 23, § 23.173, Static longitudinal stability requirement, comply with the following:

SC23.173 Static longitudinal stability: Under the conditions specified in SC23.175 and with the airplane trimmed as indicated, the characteristics of the elevator control forces and the friction within the control system must be as follows:

(a) A pull must be required to obtain and maintain speeds below the specified trim speed and a push required to obtain and maintain speeds above the specified trim speed. This must be shown at any speed that can be obtained, except that speeds requiring a control force in excess of 40 pounds or speeds above the maximum allowable speed or below the minimum speed for steady unstalled flight need not be considered.

(b) The stick force or position must vary with speed so that any substantial speed change results in a stick force or position clearly perceptible to the pilot.

(C) In place of 14 CFR part 23, § 23.175, Demonstration of static longitudinal stability requirement, comply with the following:

SC23.175 Demonstration of static longitudinal stability:

(a) Climb. The stick force curve must have, at a minimum, a neutrally stable to stable slope at speeds between 85 and 115 percent of the trim speed, with—

(1) Maximum continuous power; and

(2) The airplane trimmed at the speed used in determining the climb performance required by section 23.69(a).

(b) Cruise. With the airplane in trim with power for level flight at representative cruising speeds at high and low altitudes, including speeds up to V_{NO}, except that the speed need not exceed V_H—

(1) The stick force curve must, at a minimum, have a neutrally stable to stable slope at all speeds within a range that is the greater of 15 percent of the trim speed plus the resulting free return speed range, or 40 knots plus the resulting free return speed range, above and below the trim speed, except that the slope need not be stable—

(i) At speeds less than 1.3 V_{S1}; or

(ii) For airplanes with V_{NE} established under section 23.1505(a), at speeds greater than V_{NE}.

(c) Landing. The stick force curve must, at a minimum, have a neutrally stable to stable slope at speeds between 1.1 V_{S1} and 1.8 V_{S1} with—

(1) Landing gear extended; and

(2) The airplane trimmed at—

(i) V_{REF}, or the minimum trim speed if higher, with power off; and

(ii) V_{REF} with enough power to maintain a 3 degree angle of descent.

(D) In place of 14 CFR part 23, § 23.177, Static directional and lateral stability requirement, comply with the following:

SC23.177 Static directional and lateral stability:

(a) The static directional stability, as shown by the tendency to recover from a wings level sideslip with the rudder free, must be positive for any landing gear and flap position appropriate to the takeoff, climb, cruise, approach, and landing configurations. This must be shown with symmetrical power up to maximum continuous power, and at speeds from 1.2 V_{S1} up to the maximum allowable speed for the condition being investigated. The angle of sideslip for these tests must be appropriate to the type of airplane. At larger angles of sideslip, up to that at which full rudder is used or a control force limit in section 23.143 is reached, whichever occurs first, and at speeds from 1.2 V_{S1} to V_O, the rudder pedal force must not reverse.

(b) In straight, steady slips at 1.2 V_{S1} for any landing gear and flap positions, and for any symmetrical power conditions up to 50 percent of maximum continuous power, the rudder control movements and forces must

increase steadily, but not necessarily in constant proportion, as the angle of sideslip is increased up to the maximum appropriate to the type of airplane. The aileron control movements and forces may increase steadily, but not necessarily in constant proportion, as the angle of sideslip is increased up to the maximum appropriate to the type of airplane. At larger slip angles, up to the angle at which the full rudder or aileron control is used or a control force limit contained in section 23.143 is reached, the aileron and rudder control movements and forces must not reverse as the angle of sideslip is increased. Rapid entry into, and recovery from, a maximum sideslip considered appropriate for the airplane must not result in uncontrollable flight characteristics.

Issued in Kansas City, Missouri, on March 1, 2012.

John R. Colomy,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2012–6837 Filed 3–23–12; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. FAA–2012–0325; Notice No. 25–459–SC]

Special Conditions: Airbus, A350–900 Series Airplane; Passenger Seats With Non-Traditional, Large, Non-Metallic Panels

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final special conditions, request for comments.

SUMMARY: These special conditions are issued for the Airbus A350–900 series airplane. These airplanes will have a novel or unusual design feature(s) associated with seats that include non-traditional, large, non-metallic panels that would affect survivability during a post-crash fire event. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for this design feature. These special conditions contain the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

DATES: The effective date of these special conditions is March 14, 2012. We must receive your comments by May 10, 2012.

ADDRESSES: Send comments identified by docket number [FAA–2012–0325] using any of the following methods:

- *Federal eRegulations Portal:* Go to *http://www.regulations.gov/and* follow the online instructions for sending your comments electronically.
- *Mail:* Send comments to Docket Operations, M–30, U.S. Department of Transportation (DOT), 1200 New Jersey Avenue SE., Room W12–140, West Building Ground Floor, Washington, DC 20590–0001.
- *Hand Delivery or of Courier:* Take comments to Docket Operations in Room W12–140 of the West Building Ground Floor at 1200 New Jersey Avenue SE., Washington, DC between 8 a.m., and 5 p.m., Monday through Friday, except Federal holidays.
- *Fax:* Fax comments to Docket Operations at 202–493–2251.

Privacy: The FAA will post all comments it receives, without change, to *http://www.regulations.gov/,* including any personal information the commenter provides. Using the search function of the docket Web site, anyone can find and read the electronic form of all comments received into any FAA docket, including the name of the individual sending the comment (or signing the comment for an association, business, labor union, etc.). DOT's complete Privacy Act Statement can be found in the **Federal Register** published on April 11, 2000 (65 FR 19477–19478), as well as at *http://DocketsInfo.dot.gov/.*

Docket: Background documents or comments received may be read at *http://www.regulations.gov/at* any time. Follow the online instructions for accessing the docket or go to the Docket Operations in Room @W12–140 of the West Building Ground Floor at 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m., and 5 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Jeff Gardlin, FAA, Airframe/Cabin Safety, ANM–115, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue SW., Renton, Washington, 98057–3356; telephone (425) 227–2136; facsimile (425) 227–1320.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite interested people to take part in this rulemaking by sending written comments, data, or views. The most helpful comments reference a specific portion of the special conditions, explain the reason for any recommended change, and include supporting data.

We will consider all comments we receive by the closing date for comments. We will consider comments filed late if it is possible to do so without incurring expense or delay. We may change these special conditions based on the comments we receive.

Background

On August 25, 2008, Airbus applied for a type certificate for their new A350–900 series airplane. Later, Airbus requested and the FAA approved an extension to the application for FAA type certification to June 28, 2009. The A350–900 series has a conventional layout with twin wing-mounted Rolls Royce Trent engines. It features a twin aisle 9-abreast economy class layout, and accommodates side-by-side placement of LD–3 containers in the cargo compartment. The basic A350–900 series configuration accommodates 315 passengers in a standard two-class arrangement. The design cruise speed is Mach 0.85 with a Maximum Take-Off Weight of 591,000 lbs. Airbus proposes the A350–900 series to be certified for extended operations (ETOPS) beyond 180 minutes at entry into service for up to a 420-minute maximum diversion time.

The applicable airplane regulations, Title 14, Code of Federal Regulations (14 CFR) part 25, do not require seats to meet the more-stringent flammability standards required of large, non-metallic panels in the cabin interior. At the time the applicable rules were written, seats were designed with a metal frame covered by fabric, not with large, non-metallic panels. Seats also met the then-recently adopted standards for flammability of seat cushions. With the seat design being mostly fabric and metal, the contribution to a fire in the cabin had been minimized and was not considered a threat. For these reasons, seats did not need to be tested to heat-release and smoke-emission requirements.

Seat designs have now evolved to occasionally include non-traditional, large, non-metallic panels. Taken in total, the surface area of these panels is on the same order as the sidewall and overhead stowage bin interior panels. To provide the level of passenger protection intended by the airworthiness standards, these non-traditional, large, non-metallic panels in the cabin must meet the standards of part 25, Appendix F, parts IV and V, heat-release and smoke-emission requirements.

Type Certification Basis

Under Title 14, Code of Federal Regulations (14 CFR) 21.17, Airbus must

show that the A350–900 series meets the applicable provisions of 14 CFR part 25, as amended by Amendments 25–1 through 25–128.

The FAA has determined that Airbus A350–900 series airplanes must comply with the following sections: § 25.853(a) and § 25.853(c), and Amendment 25–61 and Amendment 25–66.

If the Administrator finds that the applicable airworthiness regulations (i.e., 14 CFR part 25) do not contain adequate or appropriate safety standards for the A350–900 series because of a novel or unusual design feature, special conditions are prescribed under § 21.16.

Special conditions are initially applicable to the model or series for which they are issued. Should the type certificate for that model be amended later to include any other model that incorporates the same or similar novel or unusual design feature, the special conditions would also apply to the other model under § 21.101.

In addition to the applicable airworthiness regulations and special conditions, the A350–900 series must comply with the fuel vent and exhaust emission requirements of 14 CFR part 34, the noise certification requirements of 14 CFR part 36, and the FAA must issue a finding of regulatory adequacy under § 611 of Public Law 92–574, the ''Noise Control Act of 1972.''

The FAA issues special conditions, as defined in § 11.19, under § 11.38, and they become part of the type-certification basis under § 21.17(a)(2).

Novel or Unusual Design Features

The A350–900 series will incorporate the following novel or unusual design features: Passenger seats that incorporate non-traditional, large, non-metallic panels in lieu of the traditional metal frame covered by fabric. The flammability properties of these panels have been shown to significantly affect the survivability of occupants of the cabin in the case of fire. These seats are considered a novel design for transport category airplanes that include Amendment 25–61 and Amendment 25–66 in the certification basis, and were not considered when those airworthiness standards were established.

The existing regulations do not provide adequate or appropriate safety standards for seat designs that incorporate non-traditional, large, non-metallic panels. In order to provide a level of safety that is equivalent to that provided by the balance of the cabin, additional airworthiness standards, in the form of special conditions, are necessary. These special conditions supplement § 25.853. The requirements contained in these special conditions consist of applying the identical test conditions required of all other large panels in the cabin, to seats with non-traditional, large, non-metallic panels.

Definition of ''Non-Traditional, Large, Non-Metallic Panel''

A non-traditional, large, non-metallic panel, in this case, is defined as a panel with exposed-surface areas greater than 1.5 square feet installed per seat place. The panel may consist of either a single component or multiple components in a concentrated area. Examples of parts of the seat where these non-traditional panels are installed include, but are not limited to: Seat backs, bottoms and leg/foot rests, kick panels, back shells, credenzas and associated furniture. Examples of traditional exempted parts of the seat include: Arm caps, armrest close-outs such as end bays and armrest-styled center consoles, food trays, video monitors and shrouds.

Clarification of ''Exposed''

''Exposed'' includes those panels directly exposed to the passenger cabin in the traditional sense, plus those panels enveloped such as by a dress cover. Traditional fabrics or leathers currently used on seats are excluded from these special conditions. These materials must still comply with § 25.853(a) and § 25.853(c) if used as a covering for a seat cushion, or § 25.853(a) if installed elsewhere on the seat. Non-traditional, large, non-metallic panels covered with traditional fabrics or leathers will be tested without their coverings or covering attachments.

Discussion

In the early 1980s the FAA conducted extensive research on the effects of post-crash flammability in the passenger cabin. As a result of this research and service experience, the FAA adopted new standards for interior surfaces associated with large surface area parts. Specifically, the rules require measurement of heat release and smoke emission (part 25, Appendix F, parts IV and V) for the affected parts. Heat release has been shown to have a direct correlation with post- crash fire survival time. Materials that comply with the standards (i.e., Sec. 25.853 entitled ''Compartment interiors'' as amended by Amendment 25–61 and Amendment 25–66) extend survival time by approximately 2 minutes over materials that do not comply.

At the time these standards were written the potential application of the requirements of heat release and smoke emission to seats was explored. The seat frame itself was not a concern because it was primarily made of aluminum and there were only small amounts of non-metallic materials. It was determined that the overall effect on survivability was negligible, whether or not the food trays met the heat release and smoke requirements. The requirements therefore did not address seats. The preambles to both the Notice of Proposed Rule Making (NPRM), Notice No. 85–10 (50 FR 15038, April 16, 1985) and the Final Rule at Amendment 25–61 (51 FR 26206, July 21, 1986), specifically note that seats were excluded ''because the recently-adopted standards for flammability of seat cushions will greatly inhibit involvement of the seats.''

Subsequently, the Final Rule at Amendment 25–83 (60 FR 6615, March 6, 1995) clarified the definition of minimum panel size: ''It is not possible to cite a specific size that will apply in all installations; however, as a general rule, components with exposed-surface areas of one square foot or less may be considered small enough that they do not have to meet the new standards. Components with exposed-surface areas greater than two square feet may be considered large enough that they do have to meet the new standards. Those with exposed-surface areas greater than one square foot, but less than two square feet, must be considered in conjunction with the areas of the cabin in which they are installed before a determination could be made.''

In the late 1990s, the FAA issued Policy Memorandum 97–112–39, Guidance for Flammability Testing of Seat/Console Installations, October 17, 1997 *(http://rgl.faa.gov)*. That memo was issued when it became clear that seat designs were evolving to include large, non-metallic panels with surface areas that would impact survivability during a cabin fire event, comparable to partitions or galleys. The memo noted that large surface area panels must comply with heat release and smoke emission requirements, even if they were attached to a seat. If the FAA had not issued such policy, seat designs could have been viewed as a loophole to the airworthiness standards that would result in an unacceptable decrease in survivability during a cabin fire event.

In October of 2004, an issue was raised regarding the appropriate flammability standards for passenger seats that incorporated non-traditional, large, non-metallic panels in lieu of the traditional metal covered by fabric. The Seattle Aircraft Certification Office and Transport Standards Staff reviewed this design and determined that it represented the kind and quantity of

material that should be required to pass the heat release and smoke emissions requirements. We have determined that special conditions would be promulgated to apply the standards defined in 14 CFR 25.853(d) to seats with large, non-metallic panels in their design.

Applicability

As discussed above, these special conditions apply to Airbus A350–900 series airplanes. Should Airbus apply later for a change to the type certificate to include another model incorporating the same novel or unusual design feature, the special conditions would apply to that model as well.

Conclusion

This action affects only certain novel or unusual design features on Airbus A350–900 series airplanes. It is not a rule of general applicability.

List of Subjects in 14 CFR Part 25

Aircraft, Aviation safety, Reporting and recordkeeping requirements.

■ The authority citation for these special conditions is as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701, 44702, 44704.

The Special Conditions

So, by the authority delegated to me by the Administrator, the following special conditions are issued as part of the type certification basis for Airbus A350–900 series airplanes with passenger seats that have non-traditional, large, non-metallic panels.

1. Compliance with 14 CFR part 25 Appendix F, parts IV and V, heat release and smoke emission, is required for seats that incorporate non-traditional, large nonmetallic panels that may either be a single component or multiple components in a concentrated area in their design.

2. The applicant may designate up to and including 1.5 square feet of non-traditional, nonmetallic panel material per seat place that does not have to comply with No. 1. A triple seat assembly may have a total of 4.5 square feet excluded on any portion of the assembly (e.g., outboard seat place 1 sq. ft., middle 1 sq. ft., and inboard 2.5 sq. ft.).

3. Seats need not meet the test requirements of 14 CFR part 25 Appendix F, parts IV and V when installed in compartments that are not otherwise required to meet these requirements. Examples include:

a. Airplanes with passenger capacities of 19 or less,

b. Airplanes exempted from smoke and heat release requirements.

Issued in Renton, Washington, on March 14, 2012.

John Piccola,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2012–7235 Filed 3–23–12; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2011–1087; Directorate Identifier 2011–NM–032–AD; Amendment 39–16967; AD 2012–04–11]

RIN 2120–AA64

Airworthiness Directives; Airbus Airplanes

Correction

In rule document 2012–5859 appearing on pages 14679–14681 in the issue of March 13, 2012, make the following correction:

§ 39.13 [Corrected]

■ On page 14680, in § 39.13, in the third column, the table is corrected to read as set forth below:

TABLE 1—LIST OF FWC PART NUMBERS AFFECTED BY THIS AD

FWC Part Number
350E017238484 (H1D1)
350E016187171 (C5)
350E017248685 (H1D2)
350E017251414 (H1E1)
350E017271616 (H1E2)
350E018291818 (H1E3CJ)
350E018301919 (H1E3P)
350E018312020 (H1E3Q)
350E053020202 (H2E2)
350E053020303 (H2E3)
350E053020404 (H2E4)
350E053020606 (H2F2)
350E053020707 (H2F3)
350E053021010 (H2F3P)
350E053020808 (H2F4)

[FR Doc. C1–2012–5859 Filed 3–23–12; 8:45 am]

BILLING CODE 1505–01–D

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2011–0499; Airspace Docket No. 11–ACE–10]

Amendment of Class E Airspace; Hastings, NE

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This action amends Class E airspace at Hastings, NE. Additional controlled airspace is necessary to accommodate new Area Navigation (RNAV) Standard Instrument Approach Procedures at Hastings Municipal Airport. The FAA is taking this action to enhance the safety and management of Instrument Flight Rule (IFR) operations at the airport.

DATES: Effective date: 0901 UTC, May 31, 2012. The Director of the **Federal Register** approves this incorporation by reference action under 1 CFR part 51 subject to the annual revision of FAA Order 7400.9 and publication of conforming amendments.

FOR FURTHER INFORMATION CONTACT: Scott Enander, Central Service Center, Operations Support Group, Federal Aviation Administration, Southwest Region, 2601 Meacham Blvd., Fort Worth, TX 76137; telephone (817) 321–7716.

SUPPLEMENTARY INFORMATION:

History

On November 28, 2011, the FAA published in the **Federal Register** a notice of proposed rulemaking (NPRM) to amend Class E airspace for the Hastings, NE., area, creating additional controlled airspace at Hastings Municipal Airport (76 FR 72867) Docket No. FAA–2011–0499. Interested parties were invited to participate in this rulemaking effort by submitting written comments on the proposal to the FAA. No comments were received. Class E airspace designations are published in paragraph 6005 of FAA Order 7400.9V dated August 9, 2011, and effective September 15, 2011, which is incorporated by reference in 14 CFR Part 71.1. The Class E airspace designations listed in this document will be published subsequently in the Order.

The Rule

This action amends Title 14 Code of Federal Regulations (14 CFR) Part 71 by amending Class E airspace extending upward from 700 feet above the surface to accommodate new RNAV standard instrument approach procedures at Hastings Municipal Airport, Hastings, NE. This action is necessary for the safety and management of IFR operations at the airport.

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. Therefore, this regulation: (1) Is not a ''significant regulatory action''

under Executive Order 12866; (2) is not a ''significant rule'' under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule, when promulgated, will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

The FAA's authority to issue rules regarding aviation safety is found in Title 49 of the U.S. Code. Subtitle 1, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency's authority. This rulemaking is promulgated under the authority described in Subtitle VII, Part A, Subpart I, Section 40103. Under that section, the FAA is charged with prescribing regulations to assign the use of airspace necessary to ensure the safety of aircraft and the efficient use of airspace. This regulation is within the scope of that authority as it amends controlled airspace in the Hastings, NE., area.

List of Subjects in 14 CFR Part 71

Airspace, Incorporation by reference, Navigation (Air)

Adoption of the Amendment

In consideration of the foregoing, the Federal Aviation Administration amends 14 CFR part 71 as follows:

PART 71—DESIGNATION OF CLASS A, B, C, D, AND E AIRSPACE AREAS; AIR TRAFFIC SERVICE ROUTES; AND REPORTING POINTS

■ 1. The authority citation for 14 CFR part 71 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40103, 40113, 40120; E. O. 10854, 24 FR 9565, 3 CFR, 1959–1963 Comp., p. 389.

§ 71.1 [Amended]

■ 2. The incorporation by reference in 14 CFR 71.1 of the Federal Aviation Administration Order 7400.9V, Airspace Designations and Reporting Points, dated August 9, 2011, and effective September 15, 2011, is amended as follows:

Paragraph 6005 Class E airspace areas extending upward from 700 feet or more above the surface.

* * * * *

ACE NE E5 Hastings, NE [Amended]

Hastings Municipal Airport, NE

(Lat. 40°36′19″ N., long. 98°25′40″ W.)

That airspace extending upward from 700 feet above the surface within a 7.2-mile radius of Hastings Municipal Airport, and within 2 miles each side of the 150° bearing from the airport extending from the 7.2-mile radius to 10.4 miles southeast of the airport.

Issued in Fort Worth, Texas, on March 14, 2012.

David P. Medina,

Manager, Operations Support Group, ATO Central Service Center.

[FR Doc. 2012–7104 Filed 3–23–12; 8:45 am]

BILLING CODE 4910–13–P

COMMODITY FUTURES TRADING COMMISSION

17 CFR Parts 4, 145, and 147

RIN 3038–AD30

Commodity Pool Operators and Commodity Trading Advisors: Compliance Obligations

Correction

Editorial Note: FR DOC 2012–3390 appearing on pages 11252–11344 in the issue of Friday, February 24, 2012 is being partially republished due to numerous errors.

1. On page 11252, in the first column, the **SUMMARY** section is being republished in its entirety.

SUMMARY: The Commodity Futures Trading Commission is adopting amendments to its existing part 4 regulations and promulgating one new regulation regarding Commodity Pool Operators and Commodity Trading Advisors. The Commission is also adopting new data collections for CPOs and CTAs that are consistent with a data collection required under the Dodd-Frank Act for entities registered with both the Commission and the Securities and Exchange Commission. The adopted amendments rescind an exemption from registration as a CPO; rescind relief from the certification requirement for annual reports provided to operators of certain pools offered only to qualified eligible persons (''QEPs''); modify the criteria for claiming exclusion from the definition of CPO; and require the annual filing of notices claiming exemptive relief under several sections of the Commision's regulations. Finally, the adopted amendments include new risk disclosure requirements for CPOs and CTAs regarding swap transactions.

2. In 17 CFR Part 4, beginning on page 11283, in the second column, in 31st line of text, amendatory instructions 1–8 and their corresponding amendments to the Code of Federal Regulations are being republished as follows:

PART 4—COMMODITY POOL OPERATORS AND COMMODITY TRADING ADVISORS

■ 1. The authority citation for part 4 continues to read as follows:

Authority: 7 U.S.C. 1a, 2, 4, 6(c), 6b, 6c, 6l, 6m, 6n, 6o, 12a, and 23.

■ 2. In § 4.5, add paragraphs (c)(2)(iii) and (c)(5) to read as follows:

§ 4.5 Exclusion from the definition of the term ''commodity pool operator.''

* * * * *

(c) * * *

(2) * * *

(iii) Furthermore, if the person claiming the exclusion is an investment company registered as such under the Investment Company Act of 1940, then the notice of eligibility must also contain representations that such person will operate the qualifying entity as described in Rule 4.5(b)(1) in a manner such that the qualifying entity:

(A) Will use commodity futures or commodity options contracts, or swaps solely for bona fide hedging purposes within the meaning and intent of Rules 1.3(z)(1) and 151.5 (17 CFR 1.3(z)(1) and 151.5); Provided however, That in addition, with respect to positions in commodity futures or commodity option contracts, or swaps which do not come within the meaning and intent of Rules 1.3(z)(1) and 151.5, a qualifying entity may represent that the aggregate initial margin and premiums required to establish such positions will not exceed five percent of the liquidation value of the qualifying entity's portfolio, after taking into account unrealized profits and unrealized losses on any such contracts it has entered into; and, Provided further, That in the case of an option that is in-the-money at the time of purchase, the in-the-money amount as defined in Rule 190.01(x) (17 CFR 190.01(x)) may be excluded in computing such five percent; or

(B) The aggregate net notional value of commodity futures, commodity options contracts, or swaps positions not used solely for bona fide hedging purposes within the meaning and intent of Rules 1.3(z)(1) and 151.5 (17 CFR 1.3(z)(1) and 151.5), determined at the time the most recent position was established, does not exceed 100 percent of the liquidation value of the pool's portfolio, after taking into account unrealized profits and unrealized losses on any such positions it has entered into. For the purpose of this paragraph:

(*1*) The term ''notional value'' shall be calculated for each futures position by multiplying the number of contracts by the size of the contract, in contract units

(taking into account any multiplier specified in the contract), by the current market price per unit, for each such option position by multiplying the number of contracts by the size of the contract, adjusted by its delta, in contract units (taking into account any multiplier specified in the contract), by the strike price per unit, for each such retail forex transaction, by calculating the value in U.S. Dollars for such transaction, at the time the transaction was established, excluding for this purpose the value in U.S. Dollars of offsetting long and short transactions, if any, and for any cleared swap by the value as determined consistent with the terms of 17 CFR part 45; and

(*2*) The person may net futures contracts with the same underlying commodity across designated contract markets and foreign boards of trade; and swaps cleared on the same designated clearing organization where appropriate; and (C) Will not be, and has not been, marketing participations to the public as or in a commodity pool or otherwise as or in a vehicle for trading in the commodity futures, commodity options, or swaps markets.

* * * * *

(5) *Annual notice.* Each person who has filed a notice of exclusion under this section must affirm on an annual basis the notice of exemption from registration, withdraw such exemption due to the cessation of activities requiring registration or exemption therefrom, or withdraw such exemption and apply for registration within 60 days of the calendar year end through National Futures Association's electronic exemption filing system.

* * * * *

■ 3. In § 4.7:

■ a. Revise paragraphs (a)(3)(ix), (a)(3)(x), and (b)(3) to read as follows:

§ 4.7 Exemption from certain part 4 requirements for commodity pool operators with respect to offerings to qualified eligible persons and for commodity trading advisors with respect to advising qualified eligible persons.

* * * * *

(a) * * *

(3) * * *

(ix) A natural person whose individual net worth, or joint net worth with that person's spouse at the time of either his purchase in the exempt pool or his opening of an exempt account would qualify him as an accredited investor as defined in § 230.501(a)(5) of this title;

(x) A natural person who would qualify as an accredited investor as defined in § 203.501(a)(6) of this title;

* * * * *

(b) * * *

(3) *Annual report relief.* (i) Exemption from the specific requirements of § 4.22(c) of this part; *Provided,* that within 90 calendar days after the end of the exempt pool's fiscal year or the permanent cessation of trading, whichever is earlier, the commodity pool operator electronically files with the National Futures Association and distributes to each participant in lieu of the financial information and statements specified by that section, an annual report for the exempt pool, affirmed in accordance with § 4.22(h) which contains, at a minimum:

(A) A Statement of Financial Condition as of the close of the exempt pool's fiscal year (elected in accordance with § 4.22(g));

(B) A Statement of Operations for that year;

(C) Appropriate footnote disclosure and such further material information as may be necessary to make the required statements not misleading. For a pool that invests in other funds, this information must include, but is not limited to, separately disclosing the amounts of income, management and incentive fees associated with each investment in an investee fund that exceeds five percent of the pool's net assets. The income, management and incentive fees associated with an investment in an investee fund that is less than five percent of the pool's net assets may be combined and reported in the aggregate with the income, management and incentive fees of other investee funds that, individually, represent an investment of less than five percent of the pool's net assets. If the commodity pool operator is not able to obtain the specific amounts of management and incentive fees charged by an investee fund, the commodity pool operator must disclose the percentage amounts and computational basis for each such fee and include a statement that the CPO is not able to obtain the specific fee amounts for this fund;

(D) Where the pool is comprised of more than one ownership class or series, information for the series or class on which the financial statements are reporting should be presented in addition to the information presented for the pool as a whole; except that, for a pool that is a series fund structured with a limitation on liability among the different series, the financial statements are not required to include consolidated information for all series.

(ii) *Legend.* If a claim for exemption has been made pursuant to this section, the commodity pool operator must make a statement to that effect on the cover page of each annual report.

* * * * *

■ 4. In § 4.13:

■ a. Revise paragraphs (a)(3)(ii)(B)(*1*) and (*2*);

■ b. Remove and reserve paragraph (a)(4);

■ c. Revise paragraph (b)(1)(ii);

■ d. Redesignate paragraph (b)(4) as paragraph (b)(5) and add new paragraph (b)(4); and

■ e. Revise paragraph (e)(2).

The revisions and additions read as follows:

§ 4.13 Exemption from registration as a commodity pool operator.

* * * * *

(a) * * *

(3) * * *

(ii) * * *

(B) * * *

(*1*) The term ''notional value'' shall be calculated for each futures position by multiplying the number of contracts by the size of the contract, in contract units (taking into account any multiplier specified in the contract), by the current market price per unit, for each such option position by multiplying the number of contracts by the size of the contract, adjusted by its delta, in contract units (taking into account any multiplier specified in the contract), by the strike price per unit, for each such retail forex transaction, by calculating the value in U.S. Dollars of such transaction, at the time the transaction was established, excluding for this purpose the value in U.S. Dollars of offsetting long and short transactions, if any, and for any cleared swap by the value as determined consistent with the terms of 17 CFR part 45; and

(*2*) The person may net futures contracts with the same underlying commodity across designated contract markets and foreign boards of trade; and swaps cleared on the same derivatives clearing organization where appropriate; and

* * * * *

(b) * * *

(2) * * *

(ii) Contain the section number pursuant to which the operator is filing the notice (*i.e.,* § 4.13(a)(1), (2), or (3)) and represent that the pool will be operated in accordance with the criteria of that paragraph; and

* * * * *

(4) *Annual Notice.* Each person who has filed a notice of exemption from registration under this section must

affirm on an annual basis the notice of exemption from registration, withdraw such exemption due to the cessation of activities requiring registration or exemption therefrom, or withdraw such exemption and apply for registration within 60 days of the calendar year end through National Futures Association's electronic exemption filing system.

* * * * *

(e) * * *

(2) If a person operates one or more commodity pools described in paragraph (a)(3) of this section, and one or more commodity pools for which it must be, and is, registered as a commodity pool operator, the person is exempt from the requirements applicable to a registered commodity pool operator with respect to the pool or pools described in paragraph (a)(3) of this section; *Provided,* That the person:

(i) Furnishes in written communication physically delivered or delivered through electronic transmission to each prospective participant in a pool described in paragraph (a)(3) of this section that it operates:

(A) A statement that it will operate the pool as if the person was exempt from registration as a commodity pool operator;

(B) A description of the criteria pursuant to which it will so operate the pool;

(ii) Complies with paragraph (c) of this section; and

(iii) Provides each existing participant in a pool that the person elects to operate as described in paragraph (a)(3) of this section a right to redeem the participant's interest in the pool, and informs each such participant of that right no later than the time the person commences to operate the pool as described in paragraph (a)(3) of this section.

* * * * *

■ 5. In § 4.14:

■ a. Revise paragraph (a)(8)(i)(D); and

■ b. Redesignate paragraph (a)(8)(iii)(D) as (a)(8)(iii)(E) and add a new paragraph (a)(8)(iii)(D).

The revision and addition read as follows:

§ 4.14 Exemption from registration as a commodity trading adviser.

* * * * *

(a) * * *

(8) * * *

(i) * * *

(D) A commodity pool operator who has claimed an exemption from registration under § 4.13(a)(3), or, if registered as a commodity pool operator, who may treat each pool it operates that meets the criteria of § 4.13(a)(3) as if it were not so registered; and

* * * * *

(iii) * * *

(D) *Annual notice.* Each person who has filed a notice of exemption from registration under this section must affirm on an annual basis the notice of exemption from registration, withdraw such exemption due to the cessation of activities requiring registration or exemption therefrom, or withdraw such exemption and apply for registration within 60 days of the calendar year end through National Futures Association's electronic exemption filing system.

* * * * *

■ 6. In § 4.24, add paragraph (b)(5) to read as follows:

§ 4.24 General disclosures required.

* * * * *

(b) * * *

(5) If the pool may engage in swaps, the Risk Disclosure Statement must further state:

SWAPS TRANSACTIONS, LIKE OTHER FINANCIAL TRANSACTIONS, INVOLVE A VARIETY OF SIGNIFICANT RISKS. THE SPECIFIC RISKS PRESENTED BY A PARTICULAR SWAP TRANSACTION NECESSARILY DEPEND UPON THE TERMS OF THE TRANSACTION AND YOUR CIRCUMSTANCES. IN GENERAL, HOWEVER, ALL SWAPS TRANSACTIONS INVOLVE SOME COMBINATION OF MARKET RISK, CREDIT RISK, COUNTERPARTY CREDIT RISK, FUNDING RISK, LIQUIDITY RISK, AND OPERATIONAL RISK.

HIGHLY CUSTOMIZED SWAPS TRANSACTIONS IN PARTICULAR MAY INCREASE LIQUIDITY RISK, WHICH MAY RESULT IN A SUSPENSION OF REDEMPTIONS. HIGHLY LEVERAGED TRANSACTIONS MAY EXPERIENCE SUBSTANTIAL GAINS OR LOSSES IN VALUE AS A RESULT OF RELATIVELY SMALL CHANGES IN THE VALUE OR LEVEL OF AN UNDERLYING OR RELATED MARKET FACTOR.

IN EVALUATING THE RISKS AND CONTRACTUAL OBLIGATIONS ASSOCIATED WITH A PARTICULAR SWAP TRANSACTION, IT IS IMPORTANT TO CONSIDER THAT A SWAP TRANSACTION MAY BE MODIFIED OR TERMINATED ONLY BY MUTUAL CONSENT OF THE ORIGINAL PARTIES AND SUBJECT TO AGREEMENT ON INDIVIDUALLY NEGOTIATED TERMS. THEREFORE, IT MAY NOT BE POSSIBLE FOR THE COMMODITY POOL OPERATOR TO MODIFY, TERMINATE, OR OFFSET THE POOL'S OBLIGATIONS OR THE POOL'S EXPOSURE TO THE RISKS ASSOCIATED WITH A TRANSACTION PRIOR TO ITS SCHEDULED TERMINATION DATE.

* * * * *

■ 7. In § 4.34, add paragraph (b)(4) to read as follows:

§ 4.34 General disclosures required.

* * * * *

(b) * * *

(4) If the commodity trading advisor may engage in swaps, the Risk Disclosure Statement must further state:

SWAPS TRANSACTIONS, LIKE OTHER FINANCIAL TRANSACTIONS, INVOLVE A VARIETY OF SIGNIFICANT RISKS. THE SPECIFIC RISKS PRESENTED BY A PARTICULAR SWAP TRANSACTION NECESSARILY DEPEND UPON THE TERMS OF THE TRANSACTION AND YOUR CIRCUMSTANCES. IN GENERAL, HOWEVER, ALL SWAPS TRANSACTIONS INVOLVE SOME COMBINATION OF MARKET RISK, CREDIT RISK, FUNDING RISK, AND OPERATIONAL RISK.

HIGHLY CUSTOMIZED SWAPS TRANSACTIONS IN PARTICULAR MAY INCREASE LIQUIDITY RISK, WHICH MAY RESULT IN YOUR ABILITY TO WITHDRAW YOUR FUNDS BEING LIMITED. HIGHLY LEVERAGED TRANSACTIONS MAY EXPERIENCE SUBSTANTIAL GAINS OR LOSSES IN VALUE AS A RESULT OF RELATIVELY SMALL CHANGES IN THE VALUE OR LEVEL OF AN UNDERLYING OR RELATED MARKET FACTOR.

IN EVALUATING THE RISKS AND CONTRACTUAL OBLIGATIONS ASSOCIATED WITH A PARTICULAR SWAP TRANSACTION, IT IS IMPORTANT TO CONSIDER THAT A SWAP TRANSACTION MAY BE MODIFIED OR TERMINATED ONLY BY MUTUAL CONSENT OF THE ORIGINAL PARTIES AND SUBJECT TO AGREEMENT ON INDIVIDUALLY NEGOTIATED TERMS. THEREFORE, IT MAY NOT BE POSSIBLE TO MODIFY, TERMINATE, OR OFFSET YOUR OBLIGATIONS OR YOUR EXPOSURE TO THE RISKS ASSOCIATED WITH A TRANSACTION PRIOR TO ITS SCHEDULED TERMINATION DATE.

* * * * *

■ 8. Effective July 2, 2012, revise § 4.27, as added November 16, 2011, at 76 FR 71114, and effective March 31, 2012 to read as follows:

§ 4.27 Additional reporting by advisors of certain large commodity pools.

(a) *General definitions.* For the purposes of this section:

(1) *Commodity pool operator* or *CPO* has the same meaning as commodity pool operator defined in section 1a(11) of the Commodity Exchange Act;

(2) *Commodity trading advisor* or *CTA* has the same meaning as defined in section 1a(12);

(3) *Direct* has the same meaning as defined in section 4.10(f);

(4) *Net asset value* or *NAV* has the same meaning as net asset value as defined in section 4.10(b);

(5) *Pool* has the same meaning as defined in section 1(a)(10) of the Commodity Exchange Act;

(6) *Reporting period* means the reporting period as defined in the forms promulgated hereunder;

(b) *Persons required to report.* A reporting person is:

(1) Any commodity pool operator that is registered or required to be registered under the Commodity Exchange Act and the Commission's regulations thereunder; or

(2) Any commodity trading advisor that is registered or required to be registered under the Commodity Exchange Act and the Commission's regulations thereunder.

(c) *Reporting.* (1) Except as provided in paragraph (c)(2) of this section, each reporting person shall file with the National Futures Association, a report with respect to the directed assets of each pool under the advisement of the commodity pool operator consistent with appendix A to this part or commodity trading advisor consistent with appendix C to this part.

(2) All financial information shall be reported in accordance with generally accepted accounting principles consistently applied.

(d) *Investment advisers to private funds.* Except as otherwise expressly provided in this section, CPOs and CTAs that are dually registered with the Securities and Exchange Commission and are required to file Form PF pursuant to the rules promulgated under the Investment Advisers Act of 1940, shall file Form PF with the Securities and Exchange Commission in lieu of filing such other reports with respect to private funds as may be required under this section. In addition, except as otherwise expressly provided in this section, CPOs and CTAs that are dually registered with the Securities and Exchange Commission and are required to file Form PF pursuant to the rules promulgated under the Investment Advisers Act of 1940, may file Form PF with the Securities and Exchange Commission in lieu of filing such other reports with respect to commodity pools that are not private funds as may be required under this section. Dually registered CPOs and CTAs that file Form PF with the Securities and Exchange Commission will be deemed to have filed Form PF with the Commission for purposes of any enforcement action regarding any false or misleading statement of a material fact in Form PF.

(e) *Filing requirements.* Each report required to be filed with the National Futures Association under this section shall:

(1)(i) Contain an oath and affirmation that, to the best of the knowledge and belief of the individual making the oath and affirmation, the information contained in the document is accurate and complete; *Provided, however,* That it shall be unlawful for the individual to make such oath or affirmation if the individual knows or should know that any of the information in the document is not accurate and complete and

(ii) Each oath or affirmation must be made by a representative duly authorized to bind the CPO or CTA.

(2) Be submitted consistent with the National Futures Association's electronic filing procedures.

(f) *Termination of reporting requirement.* All reporting persons shall continue to file such reports as are required under this section until the effective date of a Form 7W filed in accordance with the Commission's regulations.

(g) *Public records.* Reports filed pursuant to this section shall not be considered Public Records as defined in § 145.0 of this chapter.

Editorial Note: FR DOC 2012–3390 appearing on pages 11252–11344 in the issue of Friday, February 24, 2012 is being partially republished due to numerous errors.

[FR Doc. C1–2012–3390 Filed 3–23–12; 8:45 a.m.]

BILLING CODE 1505–01–D

DEPARTMENT OF HOMELAND SECURITY

U.S. Customs and Border Protection

DEPARTMENT OF THE TREASURY

19 CFR PARTS 4 and 24

[CBP Dec. 12–04; USCBP–2008–0085]

RIN 1515–AD74

Interest on Untimely Paid Vessel Repair Duties

AGENCY: U.S. Customs and Border Protection, Department of Homeland Security; Department of the Treasury.

ACTION: Final rule.

SUMMARY: This document adopts as a final rule, without change, the proposed amendments to the CBP regulations that provide that where an owner or master of a vessel documented under the laws of the United States fails to timely pay the duties determined to be due to CBP that are associated with the purchase of equipment for, or repair to, the vessel while it is outside the United States, interest will accrue on the amounts owed to CBP and that person will be liable for interest. The purpose of this document is to ensure that the CBP regulations reflect that CBP collects interest as part of its inherent revenue collection functions in situations where an owner or master of a vessel fails to pay the vessel repair duties determined to be due within 30 days of CBP issuing the bill.

DATES: *Effective Date:* April 25, 2012.

FOR FURTHER INFORMATION CONTACT: George F. McCray, Chief, Cargo Security, Carriers and Immigration Branch, Regulations and Rulings, Office of International Trade, (202) 325–0082.

SUPPLEMENTARY INFORMATION:

Background

On April 1, 2011, U.S. Customs and Border Protection (CBP) published in the **Federal Register** (76 FR 18132) a proposal to amend title 19 of the Code of Federal Regulations (19 CFR) regarding the payment of interest on untimely paid vessel repairs. Specifically, CBP proposed amendments to the regulations to provide that where an owner or master of a vessel documented under the laws of the United States fails to timely pay the duties determined to be due to CBP that are associated with the purchase of equipment for, or repair to, the vessel while it is outside the United States, interest will accrue on the amounts owed to CBP and that person will be liable for interest.

CBP solicited comments on the proposed rulemaking.

Discussion of Comment

One commenter responded to the solicitation of public comment in the proposed rule. The comment was favorable and recommended adoption of the proposed amendments as a final rule.

Conclusion

In light of the fact that a single favorable comment was submitted in response to CBP's solicitation of public comment, CBP has determined to adopt as final the proposed rule published in

the **Federal Register** (76 FR 18132) on April 1, 2011 without change.

The Regulatory Flexibility Act and Executive Order 12866

Because these amendments merely reflect the agency's revenue collection functions and rights, and impose no additional regulatory burden on the importing public, pursuant to the provisions of the Regulatory Flexibility Act, 5 U.S.C. 601 *et seq.,* it is certified that the amendments will not have a significant economic impact on a substantial number of small entities. Further, these amendments do not meet the criteria for a ''significant regulatory action'' as specified in Executive Order 12866.

Paperwork Reduction Act

As there are no new collections of information in this document, the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. 3507) are inapplicable.

Signing Authority

This rulemaking is being issued in accordance with 19 CFR 0.1(a)(1), pertaining to the authority of the Secretary of the Treasury (or his/her delegate) to approve regulations related to certain CBP revenue functions.

List of Subjects

19 CFR Part 4

Administrative practice and procedure, Cargo vessels, Customs duties and inspection, Entry, Passenger vessels, Penalties, Repairs, Reporting and recordkeeping requirements, Shipping, Vessels.

19 CFR Part 24

Accounting, Claims, Customs duties and inspection, Exports, Imports, Interest, Reporting and recordkeeping requirements, Taxes, User fees, Wages.

Amendments to the Regulations

For the reasons set forth in the preamble, parts 4 and 24 of title 19 of the CFR (19 CFR Parts 4 and 24) are amended as set forth below.

PART 4—VESSELS IN FOREIGN AND DOMESTIC TRADE

■ 1. The general authority citation for part 4 continues, and the specific authority citation for § 4.14 is revised, to read as follows:

Authority: 5 U.S.C. 301; 19 U.S.C. 66, 1431, 1433, 1434, 1624, 2071 note; 46 U.S.C. 501, 60105.

* * * * *

Section 4.14 also issued under 19 U.S.C. 1466, 1498; 31 U.S.C. 9701.

* * * * *

■ 2. In § 4.14:

■ a. The section heading is revised;

■ b. Paragraph (i)(3) is redesignated as paragraph (i)(4) and a new paragraph (i)(3) is added; and

■ c. Paragraph (j)(1) is amended by adding a new third sentence.

The revisions and additions read as follows:

§ 4.14 Equipment purchases for, and repairs to, American vessels.

* * * * *

(i) * * *

(3) *Application for Relief; failure to file or denial in whole or in part.* If no Application for Relief is filed, or if a timely filed Application for Relief is denied in whole or in part, the VRU will determine the amount of duty due and issue a bill to the party who filed the vessel repair entry. If the bill is not timely paid, interest will accrue as provided in § 24.3a(b)(1) of this chapter.

(j) * * *

(1) * * * The owner or master of the vessel who fails to timely pay the duty determined to be due is liable for interest as provided in § 24.3a(b)(1) of this chapter.

* * * * *

PART 24—CUSTOMS FINANCIAL AND ACCOUNTING PROCEDURE

■ 3. The general authority citation for part 24 is revised to read as follows:

Authority: 5 U.S.C. 301; 19 U.S.C. 58a–58c, 66, 1202 (General Note 3(i), Harmonized Tariff Schedule of the United States, 1505, 1520, 1624; 26 U.S.C. 4461, 4462; 31 U.S.C. 3717, 9701; Pub. L. 107–296, 116 Stat. 2135 (6 U.S.C. 1 *et seq.*).

* * * * *

■ 4. Section 24.3a is amended:

■ a. By revising the section heading;

■ b. In paragraph (a): by adding, after the parenthetical phrase that ends with the word ''reliquidation'', the language '', or vessel repair duties,''; and by removing the words ''shall be'' and adding in their place the word ''are'';

■ c. In the heading text to paragraph (b)(1), by adding after the word ''for'' the words ''vessel repair duties,'';

■ d. In paragraph (b)(2)(i) introductory text, by removing the word ''shall'' and adding in its place the word ''will'';

■ e. In paragraph (b)(2)(i)(A), by removing the word ''shall'' and adding in its place the word ''will'';

■ f. In paragraph (b)(2)(i)(B) introductory text, by removing the word ''shall'' and adding in its place the word ''will'';

■ g. In paragraph (b)(2)(i)(B)(*1*), by removing the word ''shall'' and adding in its place the word ''will'';

■ h. In paragraph (b)(2)(i)(B)(*2*), by removing the word ''shall'' and adding in its place the word ''will'';

■ i. In paragraph (b)(2)(i)(B)(*3*), by removing the word ''shall'' wherever it appears and adding in each place the word ''will'';

■ j. In paragraph (b)(2)(i)(B)(*4*), by removing the word ''shall'' and adding in its place the word ''will'';

■ k. In paragraph (b)(2)(i)(C), by removing the word ''shall'' and adding in its place the word ''will'';

■ l. In paragraph (b)(2)(ii), by removing the word ''shall'' wherever it appears and adding in each place the word ''will''; and

■ m. In paragraph (c)(1), by removing the words ''CBP Office of Finance, Indianapolis, Indiana'' and adding in their place the language ''CBP's Revenue Division, Office of Administration''.

The revision reads as follows:

§ 24.3a CBP bills; interest assessment on bills; delinquency; notice to principal and surety.

* * * * *

David V. Aguilar,

Acting Commissioner, U.S. Customs and Border Protection.

Approved: March 21, 2012.

Timothy E. Skud,

Deputy Assistant Secretary of the Treasury.

[FR Doc. 2012–7229 Filed 3–23–12; 8:45 am]

BILLING CODE 9111–14–P

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

33 CFR Part 117

[Docket No. USCG–2012–0153]

Drawbridge Operation Regulations; Pequonnock River, Bridgeport, CT, Maintenance

AGENCY: Coast Guard, DHS.

ACTION: Notice of temporary deviation from regulations.

SUMMARY: The Commander, First Coast Guard District, has issued a temporary deviation from the regulation governing the operation of the Metro North (Peck) Bridge across the Pequonnock River, mile 0.3, at Bridgeport, Connecticut. The deviation allows the bridge to remain in the closed position to facilitate miter rail repair.

DATES: This deviation is effective from April 15, 2012 through June 30, 2012.

ADDRESSES: Documents mentioned in this preamble as being available in the docket are part of docket USCG–2012–0153 and are available online at *www.regulations.gov,* inserting USCG–2012–0153 in the ''Keyword'' and then clicking ''Search''. They are also available for inspection or copying at the Docket Management Facility (M–30), U.S. Department of Transportation, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: If you have questions on this rule, call or email Ms. Judy Leung-Yee, Project Officer, First Coast Guard District, telephone (212) 668–7165, email *judy.k.leung-yee@uscg.mil.* If you have questions on viewing the docket, call Renee V. Wright, Program Manager, Docket Operations, telephone 202–366–9826.

SUPPLEMENTARY INFORMATION: The Metro North (Peck) Bridge, across the Pequonnock River, mile 0.3, at Bridgeport, Connecticut, has a vertical clearance in the closed position of 26 feet at mean high water and 32 feet at mean low water. The drawbridge operation regulations are listed at 33 CFR 117.219(b).

The operator of the bridge, Metro North Railroad, requested a temporary deviation from the regulations to facilitate scheduled bridge maintenance, miter rail repair, at the bridge.

The waterway users are recreational vessels and commercial lobster boats. The Metro North (Peck) Bridge rarely opens for vessel traffic. The bridge has received no requests to open during the past three years except for bridge testing and repairs.

Under this temporary deviation the Metro North (Peck) Bridge may remain in the closed position from April 15, 2012 through June 30, 2012. Vessels that can pass under the bridge in the closed position may do so at all times.

The waterway users were advised of the requested bridge closure and offered no objection.

In accordance with 33 CFR 117.35(e), the bridge must return to its regular operating schedule immediately at the end of the designated time period. This deviation from the operating regulations is authorized under 33 CFR 117.35.

Dated: March 1, 2012.

Gary Kassof,

Bridge Program Manager, First Coast Guard District.

[FR Doc. 2012–7130 Filed 3–23–12; 8:45 am]

BILLING CODE 9110–04–P

POSTAL SERVICE

39 CFR Parts 4, 6, and 7

Bylaws of the Board of Governors

AGENCY: Postal Service.

ACTION: Final rule.

SUMMARY: On March 24, 2010, the Board of Governors of the United States Postal Service adopted a number of amendments to the Board's Bylaws. These amendments revised and clarified the provisions concerning the election and terms of office of the Board Chairman and Vice-Chairman. The amendments also formalized the process for notation voting (voting by paper ballot) on routine or administrative matters. This final rule incorporates the changes adopted by the Board.

DATES: These amendments to the Code of Federal Regulations are effective March 26, 2012.

FOR FURTHER INFORMATION CONTACT: Julie S. Moore, Secretary of the Board, U.S. Postal Service, 475 L'Enfant Plaza SW., Washington, DC 20260–1000. Telephone: (202) 268–4800.

SUPPLEMENTARY INFORMATION: This document publishes amendments to 39 CFR Parts 4, 6, and 7, conforming to amendments to the Bylaws of the Board of Governors of the United States Postal Service. In part 4, the Board revised §§ 4.1 and 4.2 to establish December 1 as the regular commencement date of the terms of office of the newly-elected Board Chairman and Vice-Chairman. In part 6 (with a conforming amendment to part 7), the Board added a new § 6.7 to formalize the process for notation voting by paper ballot on routine, non-controversial, and administrative matters.

List of Subjects in 39 CFR Parts 4, 6, and 7

Administrative practice and procedure, Organization and functions (Government agencies), Postal Service.

Accordingly, for the reasons stated, 39 CFR Parts 4, 6, and 7 are amended as follows:

PART 4—OFFICIALS (ARTICLE IV)

■ 1. The authority citation for part 4 continues to read as follows:

Authority: 39 U.S.C. 202–205, 401(2), (10), 402, 1003, 3013, 3686.

■ 2. Section 4.1 is revised to read as follows:

§ 4.1 Chairman.

(a) The Chairman of the Board of Governors is elected by the Governors from among the members of the Board. The Chairman:

(1) Shall be elected at the Board's regularly scheduled November meeting for a term that commences on December 1 of the calendar year in which the election occurred, or upon the death, departure or resignation of the current Chairman, whichever occurs first, and expires upon the election and installation of a successor Chairman;

(2) Shall preside at all regular and special meetings of the Board, and shall set the agenda for such meetings;

(3) Shall select and appoint the chairman, vice chairman (if any), and members of any committee properly established by the Board.

(b) If the Postmaster General is elected Chairman of the Board, the Governors shall also elect one of their number to preside during proceedings dealing with matters upon which only the Governors may vote.

(c) In the event of the Chairman's death, departure or resignation prior to the election of a successor, the Board, as soon as practicable, shall elect a new Chairman who shall serve a term that commences immediately upon election and expires upon the election and installation of a successor Chairman.

(d)(1) Upon the election and installation of a new Chairman of the Board, the immediate past Chairman shall become Chairman Pro Tempore of the Board, to preside during the absence of the Chairman and Vice Chairman at any meeting of the Board during the year or years following the immediate past Chairman's tenure as Chairman and until another Chairman has been elected.

(2) The Chairman Pro Tempore shall, at the request of the Chairman or Vice Chairman, serve as the representative of the Board of Governors at conferences, trade shows, ceremonial functions and other meetings important to Postal Service business.

■ 3. Section 4.2 is revised to read as follows:

§ 4.2 Vice Chairman.

The Vice Chairman is elected by the Governors from among the members of the Board and shall perform the duties and exercise the powers of the Chairman during the Chairman's absence or disability. The Vice Chairman is elected at the Board's regularly scheduled November meeting for a term that commences on December 1 of the calendar year in which the election occurred or upon the death, departure or resignation of the current Vice Chairman, whichever occurs first, and expires upon the election and installation of a successor Vice

Chairman. In the event of the Vice Chairman's death, departure or resignation prior to the election of a successor, the Board, as soon as practicable, shall elect a new Vice Chairman who shall serve a term that commences immediately upon election and expires upon the election and installation of a successor Vice Chairman.

PART 6—MEETINGS (ARTICLE VI)

■ 4. The authority citation for part 6 continues to read as follows:

Authority: 39 U.S.C. 202, 205, 401(2), (10), 1003, 3622; 5 U.S.C. 552b(e), (g).

■ 5. Section 6.6 is amended by revising the introductory text to read as follows:

§ 6.6 Quorum and voting.

As provided by 39 U.S.C. 205(c), and except for routine, non-controversial, and administrative matters considered through the notation voting process described in § 6.7, the Board acts by resolution upon a majority vote of those members who attend a meeting in person or by teleconference. No proxies are allowed in any vote of the members of the Board. Any 6 members constitute a quorum for the transaction of business by the Board, except:

* * * * *

■ 6. Section 6.7 is added to read as follows:

§ 6.7 Notation voting.

(a) *General.* Notation voting consists of the circulation of written memoranda and voting sheets to each member of the Board simultaneously and the tabulation of submitted responses. Notation voting may be used only for routine, non-controversial, and administrative matters.

(b) *Administrative Responsibility.* The Secretary of the Board is responsible for:

(1) Distributing notation voting memoranda and voting sheets;

(2) Establishing deadlines for notation voting sheets to be completed and returned;

(3) Processing and tabulating all notation voting sheets; and

(4) Determining whether further action is required.

(c) *Veto of notation voting.* In view of the public policy for openness reflected in the Government in the Sunshine Act and in these bylaws, each Board member is authorized to veto the use of notation voting for the consideration of any matter. If a Board member vetoes the use of notation voting, the Secretary must notify all members of such action, and must promptly take action to place the particular matter on the agenda of the next regularly scheduled Board meeting following the date of the veto, or to schedule a teleconference to consider the matter, as appropriate.

(d) *Disclosure of result.* The Secretary shall maintain all records pertaining to Board actions taken pursuant to the notation voting process, and shall make such records available for public inspection, consistent with the Freedom of Information Act, 5 U.S.C. 552.

PART 7—PUBLIC OBSERVATION (ARTICLE VII)

■ 7. The authority citation for part 7 continues to read as follows:

Authority: 39 U.S.C. 410; 5 U.S.C. 552b(a)–(m).

■ 8. Section 7.1 is amended by revising the final sentence of paragraph (b) to read as follows:

§ 7.1 Definitions.

* * * * *

(b) * * * The term ''meeting'' does not include any procedural deliberations required or permitted by §§ 6.1, 6.2, 7.4, or 7.5 of the bylaws in this chapter, or the notation voting process described in § 6.7 of the bylaws in this chapter.

Stanley F. Mires,

Attorney, Legal Policy & Legislative Advice.

[FR Doc. 2012–7098 Filed 3–23–12; 8:45 am]

BILLING CODE 7710–12–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R09–OAR–2011–0130, FRL–9612–7]

Approval and Promulgation of Air Quality Implementation Plans; State of Nevada; Regional Haze State Implementation Plan

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is finalizing its approval of most of the Nevada Regional Haze State Implementation Plan (SIP) that implements the Clean Air Act (CAA) Regional Haze Rule requiring states to prevent any future and remedy any existing man-made impairment of visibility in mandatory Class I areas through a regional haze program. EPA proposed to approve all parts of Nevada's SIP revisions on June 22, 2011 (76 FR 36450). This final approval applies to all aspects of Nevada's SIP except for that portion of Nevada's determination regarding the Best Available Retrofit Technology (BART) to reduce nitrogen oxide (NO_X) emissions at the Reid Gardner Generating Station (RGGS). We will take action on BART for NO_X at RGGS in a future notice.

DATES: *Effective Date:* This rule is effective on April 25, 2012.

ADDRESSES: EPA has established docket number EPA–R09–OAR–2011–0130 for this action. Generally, documents in the docket are available electronically at *http://www.regulations.gov* or in hard copy at EPA Region 9, 75 Hawthorne Street, San Francisco, California. Please note that while many of the documents in the docket are listed at *http://www.regulations.gov,* some information may not be specifically listed in the index to the docket and may be publicly available only at the hard copy location (e.g., copyrighted material, large maps, multi-volume reports or otherwise voluminous materials), and some may not be available at either locations (e.g., confidential business information). To inspect the hard copy materials, please schedule an appointment during normal business hours with the contact listed directly below.

FOR FURTHER INFORMATION CONTACT: Thomas Webb, U.S. EPA, Region 9, Planning Office, Air Division, Air-2, 75 Hawthorne Street, San Francisco, CA 94105. Thomas Webb can be reached at telephone number (415) 947–4139 and via electronic mail at *webb.thomas@epa.gov.*

SUPPLEMENTARY INFORMATION: Throughout this document, wherever ''we,'' ''us,'' or ''our,'' is used, we mean the United States Environmental Protection Agency (EPA).

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I. Background

A. Description of Regional Haze

Regional haze is the impairment of visibility across a broad geographic area produced by numerous sources and

activities that emit fine particles and their precursors, primarily sulfur dioxide (SO_2) and nitrogen oxide (NO_X), and in some cases, ammonia (NH_3) and volatile organic compounds (VOC). Fine particle precursors react in the atmosphere to form fine particulate matter ($PM_{2.5}$), primarily sulfates, nitrates, organic carbon, elemental carbon, and soil dust, which impair visibility by scattering and absorbing light. Visibility impairment reduces the clarity, color, and visible distance that one can see. $PM_{2.5}$ can also cause serious health effects and mortality in humans and contributes to environmental effects such as acid deposition and eutrophication of water bodies.

Data from existing visibility monitors, the ''Interagency Monitoring of Protected Visual Environments'' (IMPROVE) network, indicate that visibility impairment caused by air pollution occurs virtually all the time at most federally protected national parks and wilderness areas, known as Class I areas. The average visual range in many Class I areas in the western United States is 100 to 150 kilometers, or about one-half to two-thirds of the visual range that would exist without man-made air pollution.[1] In most of the eastern Class I areas of the United States, the average visual range is less than 30 kilometers, or about one-fifth of the visual range that would exist under estimated natural conditions. 64 FR 35715 (July 1, 1999).

B. History of Regional Haze Regulations

In section 169(A)(1) of the 1977 Amendments to the CAA, Congress established as a national goal the ''prevention of any future, and the remedying of any existing, impairment of visibility in mandatory class I Federal areas which impairment results from man-made air pollution.'' Visibility was determined by Congress to be an important value in 156 mandatory Class I Federal areas[2] as listed in 40 CFR 81.400–437. In the first phase of visibility protection, EPA promulgated regulations on December 2, 1980, to address visibility impairment in Class I areas that is ''reasonably attributable'' to a single source or small group of sources, i.e., ''reasonably attributable visibility impairment'' or RAVI. 45 FR 80084. EPA deferred action on regional haze that emanates from a variety of sources until monitoring, modeling and scientific knowledge about the relationship between pollutants and visibility impairment were improved.

Congress added section 169B to the CAA in 1990 to conduct scientific research on regional haze. This legislation established the Grand Canyon Visibility Transport Commission (GCVTC), which issued its report, ''Recommendations for Improving Western Vistas,'' on June 10, 1996. These recommendations informed the regulatory development of a regional haze program, and provided an option for certain western states to address visibility at 16 Class I areas on the Colorado Plateau under 40 CFR 51.309.

EPA promulgated a rule to address regional haze on July 1, 1999 known as the Regional Haze Rule (RHR). See 64 FR 35713 as amended at 70 FR 39156 (July 6, 2005) and 71 FR 60631 (October 13, 2006). The RHR revised the existing visibility regulations to include provisions addressing regional haze impairment and established a comprehensive visibility protection program for Class I areas. The requirements for regional haze, found at 40 CFR 51.308 and 51.309, are included in EPA's visibility protection regulations at 40 CFR 51.300–309.

The requirement to submit a regional haze SIP revision applies to all 50 states, the District of Columbia, and the Virgin Islands. States were required to submit the first SIP addressing regional haze visibility impairment no later than December 17, 2007. 40 CFR 51.308(b). Since most states, including Nevada, did not submit SIPs prior to the deadline, EPA made a Finding of Failure to Submit that under the Clean Air Act had the effect of creating a deadline of January 15, 2011, for EPA to approve a SIP or publish a Federal Implementation Plan (FIP). 74 FR 2392 (January 15, 2009). EPA is publishing this final action to meet this obligation in part.

For a more detailed discussion of the CAA and RHR requirements, please see sections II and III of our proposal dated June 22, 2011 (76 FR 36450). Our evaluation of the Nevada Regional Haze Plan is in section IV of the same proposal.

C. Our Proposed Action

On June 22, 2011, EPA proposed to approve all portions of Nevada's Regional Haze SIP as meeting the relevant requirements of CAA Section 169A and the Regional Haze Rule. We proposed to find that Nevada appropriately established baseline visibility conditions and a reasonable progress goal for its one Class I area; developed a long-term strategy with enforceable measures to ensure reasonable progress toward achieving the Reasonable Progress Goal in the first planning period ending in 2018; adequately applied Best Available Retrofit Technology to specific stationary sources, including RGGS; developed a regional haze monitoring strategy; provided for periodic progress reports and revisions; provided for consultation and coordination with federal land managers; and provided for the regional haze SIP's future review and revisions. We also proposed to find that emissions from Nevada do not interfere with other states' measures to protect visibility as required by CAA Section 110(a)(2)(D)(i)(II). Our proposed action provides more information about the relevant CAA requirements, EPA guidance, the State's submittals, and our review and evaluation of the SIP revisions.

II. BART Determination for NO_X at Reid Gardner

We are taking no action in today's rule on the portion of the Nevada SIP that contains the BART determination at RGGS for NO_X. Following our review of the public comments on this issue, we performed additional analysis of Nevada's NO_X BART determination for RGGS. As a result, we no longer consider the currently available information to be sufficient for us to take final action on the Nevada Division of Environmental Protection's (NDEP's) determination that rotating overfire air (ROFA) with Rotamix (a form of selective non-catalytic reduction or SNCR) is the NO_X control technology that represents BART. We intend to consider this determination in more detail at a future date.

A. Background

The RHR provides that a BART determination must take into account several factors, which are frequently referred to as the ''five-factor analysis.'' These factors are listed below (40 CFR 51.308(e)(1)(ii)(A)):

[1] Visual range is the greatest distance, in kilometers or miles, at which one can view a dark object against the sky.

[2] Areas designated as mandatory Class I Federal areas consist of national parks exceeding 6000 acres, wilderness areas and national memorial parks exceeding 5000 acres, and all international parks that were in existence on August 7, 1977. 42 U.S.C. 7472(a). In accordance with section 169A of the CAA, EPA, in consultation with the Department of Interior, promulgated a list of 156 areas where visibility is identified as an important value. 44 FR 69122 (November 30, 1979). Although states and tribes may designate as Class I additional areas which they consider to have visibility as an important value, the requirements of the visibility program set forth in section 169A of the CAA apply only to ''mandatory Class I Federal areas.'' Each mandatory Class I Federal area is the responsibility of a ''Federal Land Manager.'' 42 U.S.C. 7602(i). When we use the term ''Class I area'' in this action, we mean a ''mandatory Class I Federal area.''

- The cost of compliance for the technically feasible control technologies;
- The energy and non-air quality impacts of the control technologies;
- Any existing air pollution control technologies at the source;
- The remaining useful life of the source; and
- The degree of visibility improvement which may reasonably be anticipated to result from the various control technologies.

B. NDEP's Determination

RGGS consists of four coal-fired boilers, three of which are BART-eligible units with generating capacity of 100 megawatts (MW) each. A fourth unit (250 MW) is not BART-eligible. Nevada Energy, the owner of RGGS, performed a BART analysis for the three BART-eligible RGGS units and submitted the results of its analysis to NDEP.[3] In its BART analysis, Nevada Energy considered several NO_X control technologies and evaluated the cost of compliance and visibility improvement associated with each technology. In preparing the SIP, NDEP relied on certain aspects of Nevada Energy's analysis while performing updated analyses for other aspects. When considering the cost and cost effectiveness of compliance, NDEP developed its own set of emission reduction estimates for the various NO_X control technologies, but used Nevada Energy's estimates of total capital and annual costs.[4] When considering the degree of visibility improvement associated with various control technologies, NDEP relied upon the visibility impacts for each control option as modeled by Nevada Energy, rather than modeling the visibility impacts attributable to NDEP's own estimates of NO_X removal.

In its submittal to NDEP, Nevada Energy determined that low NO_X burners (LNB) with OFA (overfire air) were BART for NO_X. In preparing the SIP, NDEP determined that a more stringent control technology, ROFA with Rotamix, was BART for NO_X. NDEP eliminated even more stringent control options, such as Selective Catalytic Reduction (SCR) with LNB and OFA, on the grounds that ''the $/ton of NO_X removed increased significantly * * * without correspondingly significant improvements in visibility.'' [5]

C. Public Comments Relevant to NDEP's Determination

As noted in Section II.B above, NDEP's elimination of control options more stringent than ROFA with Rotamix was based on the incremental cost effectiveness ($/ton) and expected visibility improvement of the various options. EPA received several comments (see Docket Items 0054, 0057, 0061, 0062 and 0062 Attachment 6) alleging flaws in NDEP's analysis and response to comments, and stating that SCR should be BART for NO_X at RGGS. These commenters alleged certain flaws and submitted additional information in criticizing NDEP's development of the cost effectiveness values and expected visibility improvement attributable to the more stringent SCR-based control option.

Regarding cost effectiveness, several commenters (see Docket Items 0054, 0057, 0061, and 0062) alleged that the total capital and annual cost estimates relied upon by NDEP for the SCR-based control options were overestimated, included several costs not allowed by EPA's Control Cost Manual (CCM) such as owner's costs, surcharge, and allowance for funds used during construction (AFUDC), and used certain variables and values that were either inflated or unreasonable. One commenter (see docket item 0062 Attachment 6) performed a revised analysis of SCR cost effectiveness that adjusted for these alleged issues, and projected a 33 to 40 percent decrease in average and incremental cost effectiveness values as a result of these adjustments. In addition, commenters stated that total capital and annual cost estimates lacked evidentiary support in the administrative record due to the absence of detailed information such as equipment design parameters, equipment lists, and actual cost calculations. Finally, commenters also stated that the level of SCR performance relied upon by NDEP is not supported in the administrative record by site-specific information such as vendor quotes or specifications (see Docket Items 0054 and 0061 to 0063).

Regarding visibility improvement, commenters (see Docket Items 0054 and 0062) noted that while baseline visibility modeling indicated that RGGS currently causes or contributes to visibility impairment at multiple Class I areas, control scenario visibility modeling results were only provided for the single closest Class I area, Grand Canyon National Park. They asserted that the potential visibility benefit at all affected Class I areas should be accounted for when considering control technology options. In addition, as described in Section II.B above, NDEP estimated larger NO_X emission reductions than the emission reductions estimated by Nevada Energy. NDEP, however, continued to rely on the visibility modeling provided by Nevada Energy, and did not update the modeling to reflect NDEP's larger NO_X emission reduction estimates. As a result, the existing visibility modeling does not reflect the incremental visibility improvement attributable to NDEP's estimates of NO_X emission reductions. Finally, commenters noted that certain modeling files and documentation were missing from our docket and were unavailable from NDEP, such as the NO_X control scenario modeling result files and supporting information for NDEP's baseline emission scenarios.

D. EPA's Analysis

After reviewing the public comments, we performed additional analysis of the cost effectiveness and visibility improvement associated with the various NO_X control technologies considered by NDEP in determining BART at RGGS. Based upon this additional analysis, we no longer consider the currently available supporting information to be sufficiently detailed to allow us to perform a critical review of these issues. As a result, we are taking no action in this rule on NDEP's determination that ROFA with Rotamix is the NO_X control technology that represents BART.

Therefore, EPA is taking no action on the portion of the SIP containing the BART determination for NO_X at RGGS including the corresponding emission limits and schedules of compliance for NO_X at RGGS in the SIP's long-term strategy. Specifically, these are sections 5.5.3, 5.6.3 and 7.2 of Nevada's SIP that address the NO_X BART control analyses, visibility improvement, and implementation at RGGS. Since the emissions inventories used to develop the reasonable progress goal (RPG) did not include NO_X reductions from BART, the fact that we take no action in this rule regarding the RGGS BART

[3] Nevada Energy BART Analysis Reports, Reid_Gardner_1_10–03–08.pdf, Reid_Gardner_2_10–03–08.pdf, Reid_Gardner_3_10–03–08.pdf. Available in Docket Item No. EPA–R09–OAR–2011–0130–0007.

[4] Based on a comparison of emission reductions summarized in Table 1, NDEP Reid Gardner BART Determination, October 22, 2009 (Available as Docket Item No. EPA–R09–OAR–2011–0130–0005), and emission reductions summarized in Table 3–2 of the NVE BART Analysis Reports. Visibility impacts as summarized from Table 5–4 of the NVE BART Analysis Reports.

[5] Revised NDEP Reid Gardner BART Determination Review, page 6. Available as Docket Item No. EPA–R09–OAR–2011–0130–0005. See also Nevada Regional Haze SIP, Appendix D (Responses to Comments), pages D–32 to –42. Available in docket item No. EPA–R09–OAR–2011–0130–003.

determination for NO_X does not impact the RPG, and will not require adjustments to the long-term strategy (LTS) in the SIP.[6] EPA will propose further action on this particular portion of the SIP in the future.

III. EPA Responses to Public Comments Except BART for NO_X at RGGS

EPA's proposed approval published on June 22, 2011 (76 FR 36450) included a 30-day public comment period, which ended on July 22, 2011. We subsequently extended the comment period by 30 days until August 22, 2011 (76 FR 43963). We received comments from WildEarth Guardians, a consortium of environmental and conservation organizations[7] (''Consortium''), the Moapa Band of Paiutes, the Nevada Division of Environmental Protection (NDEP), the National Park Service, the U.S. Fish and Wildlife Service, and seven individuals. With the exception of NDEP's comments, which support EPA's proposed approval of its plan, most of the comments expressed opposition to EPA's full approval of the SIP. The majority of these comments criticized our proposed approval of NDEP's determination of BART controls to reduce emissions of NO_X at RGGS. In this final rule approving all other portions of Nevada's RH SIP, we are responding to all other major comments on our proposed SIP approval. We find that the SIP is approvable except BART for NO_X at RGGS on which EPA is taking no action.

A. Reasonable Progress Goal

Comments: The National Park Service and U.S. Fish and Wildlife Service expressed concern that the SIP's reasonable progress analysis was not consistent with Section 308(d)(1) of the Regional Haze Rule and EPA's *Guidance for Setting Reasonable Progress Goals under the Regional Haze Program* because NDEP ''did not consider what additional emissions reductions beyond those already being implemented might be reasonable to improve visibility.'' Similarly, WildEarth Guardians commented that the Clean Air Act requires EPA to base reasonable progress goals on the factors set forth under Section 169A(g), and not the bare minimum required to meet the uniform rate of progress. WildEarth Guardians expressed concern that ''EPA has overlooked opportunities to further reduce haze forming pollution from sources in Nevada.'' By contrast, NDEP asserted that its reasonable progress analysis considered the four factors required under the Regional Haze Rule (i.e., the costs of compliance, the time necessary for compliance, the energy and non-air quality environmental impacts of compliance, and the remaining useful life of any existing source subject to such requirements). Specifically, NDEP noted that ''[c]ost was considered first, * * * and the NDEP concluded it was not necessary to continue with an analysis of the remaining factors.''

Response: As explained in the proposed rule, in promulgating the SIP NDEP considered the four factors in setting the reasonable progress goal for the Jarbidge Wilderness Area, the only Class I area in Nevada. The RHR and EPA's guidance affords the State considerable flexibility in determining whether additional emission reduction measures are needed to achieve the RPG in the first planning period. The NDEP reasonably concluded that the cost of additional controls was not warranted given projected emissions reductions from anthropogenic sources and the fact that the majority of haze at Jarbidge is from natural and out-of-state sources. Moreover, NDEP noted in its comments that ''of the five proposed electrical generating units (EGUs) included in the State's 2018 emissions inventory, only two have moved forward and are now operational,'' which would further lower emissions projections for both NO_X and SO_2 by 2018. The comments do not demonstrate that the State failed to consider reasonably the four factors, but the comments question whether the State should have done a more robust analysis. EPA has considered the comments and the comments have not provided any further specific facts that should have been considered in the State's analysis beyond conclusory criticisms. Therefore, given the broad discretion the RHR affords the State, and the lack of specificity in the comments on this issue, EPA reaffirms its proposed decision to approve the State's reasonable progress goal for Jarbidge.

B. Long-Term Strategy

Comments: The Consortium argued that the SIP ''does not contain evidence showing full and effective consultation with other states, does not 'ensure that it has included all measures needed to achieve its apportionment of emission reduction obligations agreed upon' through that consultation process and further fails to 'document the technical basis, including modeling, monitoring and emissions information,' on which it relies to determine its apportionment of emission reduction obligations agreed upon through that process.'' Specifically, the Consortium noted that, ''[a]lthough the Proposed SIP implies that Nevada consulted with the Western Regional Air Partnership (''WRAP'') in determining its apportionment of visibility impacts to Class I areas outside of the State of Nevada, the administrative record does not support the legally-required level of consultation.'' They further argued that ''WRAP's failure to apportion Nevada's contribution does not save Nevada from its independent obligation to require adequate BART determinations and a long-term strategy to reduce haze-causing pollutants in out-of-state Class I areas from its pollution sources.''

Response: EPA disagrees with the assertions that Nevada did not consult with other states, did not meet its source apportionment obligations to Class I areas in other states, and did not document the technical basis for its apportionment as required in 40 CFR 51.308(d)(3)(i), (ii), and (iii). Although Nevada lacked formal membership in the WRAP, representatives from NDEP actively participated with other state representatives in the WRAP's committees and work groups, which jointly directed the development of the WRAP's technical analyses. Nevada and other western states relied on the WRAP's source apportionment modeling results to estimate the contribution of out-of-state emissions and relied on the WRAP's consultation process to ensure the compatibility of reasonable progress goals and long-term strategies.[8] Nevada used the WRAP's source apportionment modeling to demonstrate the minimal contribution of Nevada's emissions to sulfate and nitrate extinction at 25 Class I areas in five neighboring states.[9] Based on consultation through the WRAP, Nevada identified no major contributions that supported developing new interstate strategies, mitigation measures, or emissions reduction obligations. Nevada and neighboring states agreed that the implementation of BART and other existing measures in state regional haze plans were sufficient for the states to meet the reasonable progress goals for their respective Class I areas, and that future consultation would address any

[6] Per the Nevada RH SIP, page 6–5, the only BART emission reductions included in the 2018 emission inventory were SO_2 reductions resulting from presumptive BART limits.

[7] The Consortium's comment letter was signed by representatives of the Sierra Club, National Parks Conservation Association, Citizens for Dixie's Future, Defend Our Desert, Friends of Gold Butte, Grand Canyon Trust, and Western Resource Advocates.

[8] See 9.1.3 Past Consultation with other States in Nevada's SIP.

[9] See 4.3.3 Source Apportionment for Other Class I Areas in Nevada's SIP.

new strategies or measures needed. Moreover, Nevada did not receive any requests from other states to achieve even greater reductions in its emissions in order for other states to meet their RPGs. Therefore, EPA reaffirms its proposed determination that Nevada adequately consulted with other states, demonstrated that its SIP includes all measures necessary to obtain its share of emission reductions at other Class I areas, and provided the technical basis to document its analysis.

C. BART for SO_2 and PM_{10} at RGGS

In addition to extensive comments addressing NDEP's BART determination for NO_X at RGGS, we also received comments concerning the timing of implementation of BART at RGGS generally, as well as comments specifically addressing the SO_2 and PM_{10} BART determinations for RGGS. As noted above, we are not acting on NDEP's BART determination for NO_X at RGGS at this time. Therefore, our responses concerning RGGS are limited to comments related to the SO_2 and PM_{10} BART determinations.

1. BART for SO_2 at RGGS

Comments: Regarding NDEP's BART determination for SO_2 at RGGS, WildEarth Guardians expressed concern that ''SO_2 limits do not appear to represent the degree of reduction achievable through the application of the best system of continuous emission reduction.'' In particular, they asserted that ''it appears that Reid Gardner is already meeting emission limits that are less than half of this proposed limit'', and that ''even Nevada recognizes the SO_2 emissions increases will occur as a result of [NDEP's] proposed BART.'' By contrast, the National Park Service and the U.S. Fish and Wildlife Service praised ''NDEP's action to lower the SO_2 limit'' at RGGS.

Response: In setting the SO_2 BART limits for RGGS, NDEP took into account the existing controls at the facility, consistent with CAA Section 169A(g)(2) and 40 CFR 51.308(e)(1)(ii)(A). In particular, NDEP considered the effect of new fabric filter baghouses that were installed on all three BART units at RGGS in 2008 and 2009 pursuant to a consent decree between the facility's owner and NDEP and EPA.[10] The consent decree established an SO_2 emissions limit of 0.40 lbs/MMbtu (a million British thermal units), based on a 10-day rolling average period, for each of the three BART units.[11] In its draft regional haze SIP, NDEP proposed an SO_2 emissions limit of 0.25 lbs/MMbtu for each of the three BART units at RGGS. In response to comments from EPA and the National Park Service, NDEP subsequently lowered the BART limits to 0.15 lbs/MMbtu, based on a 24-hour averaging period.[12]

In arguing for further reductions in these BART limits, WildEarth Guardians notes that, ''according to Clean Air Markets data from the EPA, units 1–3 are meeting annual sulfur dioxide emission rates of between 0.054 and 0.064 lbs/MMbtu and have for at least the last two years.'' However, while the units' current annual average emission rates may be less than 0.15 lb/MMbtu, these figures are not directly comparable to the 24-hour rolling average emissions limits set by NDEP in its BART determination for RGGS. The more relevant points of comparison are the units' current Title V permit limits of 0.40 lbs/MMbtu, based on a 10-day rolling average period, which are more than twice the limit that NDEP has set for each of the three BART units in its Regional Haze SIP.

In response to commenters' concerns regarding potential increases in SO_2 emissions as a result of NDEP's BART determination at RGGS, EPA re-examined NDEP's estimates of emission reductions resulting from BART controls at RGGS. Nevada's SIP provides two sets of estimated emission reductions resulting from BART controls at RGGS, one based on the WRAP baseline (4,970 tons) and one based on NDEP's baseline (1,441 tons) for SO_2.[13] Although SO_2 emissions are estimated to increase by 838 tons from NDEP's baseline, they are expected to decrease by 2,696 tons from the WRAP's baseline. Under both scenarios, the emissions after BART Controls are held constant at 2,279 tons. Thus, the difference in estimated emissions reductions is a reflection of the large difference between the WRAP baseline and the NDEP baseline for SO_2.

NDEP's baseline emissions for SO_2 were calculated using acid rain data that omitted data deemed invalid due to monitoring problems that were addressed by the consent decree. According to NDEP, the omission of the invalid data effectively lowered the baseline emissions (measured in lbs/MMbtu) by nearly half.[14] Thus, the projected increase in SO_2 appears to be an artifact of NDEP's exceptionally low baseline that is attributable to the exclusion of invalid data.

From a broader perspective, NDEP's BART determination for SO_2 at RGGS will result in a lower emissions limit (0.15 lbs/MMbtu based on a 24-hour rolling average compared to the current Title V Permit limit of 0.40 lbs/MMbtu based on a 10-day rolling average period) related to the new fabric filter baghouses and existing wet soda ash with a dry flue gas desulfurization system. Since the BART determination lowers the short-term emissions limit, there is no valid reason to suspect that SO_2 emissions will increase as a result of BART controls. EPA will use the progress report due five years after the SIP's approval to evaluate actual SO_2 emissions at RGGS to ensure that NDEP's BART determination has not resulted in increased emissions and will encourage NDEP to take appropriate action, if necessary, at that time.

2. BART for PM_{10} at RGGS

Comments: Regarding the PM_{10} limit, WildEarth Guardians expressed concern that ''the proposed BART determination is unenforceable because there are no monitoring, recordkeeping, or reporting requirements proposed that would ensure compliance with the 24-hour limits. There are simply no monitoring requirements proposed that would actually ensure that the PM limit is met on a continuous basis. This is contrary to the Clean Air Act, which defines BART based on continuous emission reductions.''

Response: As explained in EPA's BART Guidelines, ''[m]onitoring requirements generally applicable to sources, including those that are subject to BART, are governed by other regulations. See, e.g., 40 CFR part 64 (compliance assurance monitoring); 40 CFR 70.6(a)(3) (periodic monitoring); 40 CFR 70.6(c)(1) (sufficiency monitoring).'' [15] The monitoring, recordkeeping and reporting requirements specifically applicable to RGGS are found in the existing Nevada SIP as well as the facility's Title V permit. In particular, the applicable SIP requires continuous monitoring of opacity and compliance with a 20 percent opacity limit.[16] Although opacity does not directly correlate with particulate concentrations, it is a good indicator of proper operation of the baghouse since almost any opacity from a baghouse-controlled coal-fired boiler

[10] See Nevada's RH SIP Sections 5.5 and 6.5.2.2.

[11] *United States* v. *Nevada Power Company,* Case 2:07–cv–00417 (D. Nev.) (consent decree entered June 15, 2007).

[12] See Nevada's RH SIP Chapter 5, footnote 4.

[13] See Nevada's RH SIP, Table 5–6 Reid Gardner: BART Emissions Reductions in Tons per Year.

[14] See Nevada's RH SIP Section 5.5.

[15] 40 CFR part 51 Appendix Y, Section V.

[16] See 40 CFR 52.1470(c); Nevada Administrative Code 445B.256–267, 22017.

is indicative of leaks in the baghouse. Under Part 64, such an excursion or exceedance must be addressed ''as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.'' [17] For directly assuring compliance with existing PM_{10} limits, the Title V permit for RGGS contains an annual stack test requirement using Method 5 for PM and Method 201A/202 for $PM_{10.}$ Given the current opacity limit in the SIP and the compliance methods in RGGS's Title V permit, we are approving the BART determination for PM_{10} in Nevada's RH SIP. We will continue to work with Nevada to ensure that all appropriate compliance provisions are in the SIP.

3. Timing of Implementation

Comments: WildEarth Guardians expressed concern that ''EPA has not demonstrated that 'by January 1, 2015' is as expeditiously as practical for complying with BART at Reid Gardner, nor shown that it is reasonable to allow the facility a full five years to come into compliance with BART.''

Response: The Nevada BART regulation in the Regional Haze SIP requires that the BART control measures at RGGS must be installed and operating ''[o]n or before January 1, 2015; or (2) [n]ot later than 5 years after approval of Nevada's state implementation plan for regional haze by the United States Environmental Protection Agency Region 9, whichever occurs first.'' Given the date of our approval of Nevada's SIP, the BART implementation deadline for the RGGS is January 1, 2015, about three years from the date of this final rule. EPA considers Nevada's choice of the January 1, 2015, to be reasonable in this instance.

D. Corrections to EPA's Technical Analysis

Comments: NDEP noted a few corrections to EPA's analysis in the proposed rule at 76 FR 36450 (June 22, 2011), but stated that these minor corrections do not alter any of EPA's conclusions. The first correction was to note that the percentages of emissions by source category shown in section IV.C.2 of EPA's proposed rule are based on the 2018 emissions inventory. The proposal omitted the date of the inventory. Secondly, NDEP commented that the discussion of predominant sources of $PM_{2.5}$ was in error because ''the predominant source of PM fine emissions are windblown dust (43 percent) and fugitive dust (30 percent).'' EPA had mistakenly attributed PM fine emissions to natural fires (49 percent) and area sources (37 percent). Lastly, NDEP commented on the sources of visibility impairment, saying that soil in $PM_{2.5}$ is mostly from windblown dust, not natural fire. EPA had mistakenly attributed the source of $PM_{2.5}$ to natural fire.

Response: EPA is correcting the record as noted above.

IV. EPA Action

Under section 110(k)(3) of the CAA, EPA is fully approving most portions of the Nevada Regional Haze SIP as satisfying all of the relevant requirements of CAA Section 169A and the Regional Haze Rule. For the portions of the SIP establishing BART for NO_X at RGGS, EPA is taking no action at this time, and will take action on those portions of the SIP in a separate rulemaking.

We find that Nevada has met the following Regional Haze Rule requirements: The State established baseline visibility conditions and reasonable progress goals for each of its Class I areas; the State developed a long-term strategy with enforceable measures ensuring reasonable progress towards meeting the reasonable progress goals for the first ten-year planning period, through 2018; the State has adequately addressed the application of Best Available Retrofit Technology to specific stationary sources, except for NO_X at RGGS; the State has an adequate regional haze monitoring strategy; the State provided for consultation and coordination with federal land managers in producing its regional haze plan; and, the State provided for the regional haze plan's future revisions.

In addition, under section 110(k)(3) of the CAA, we are fully approving the Nevada Regional Haze SIP as satisfying the CAA Section 110(a)(2)(D)(i)(II) requirement to prohibit emissions that will interfere with measures to protect visibility in another state for the 1997 8-hour ozone and 1997 $PM_{2.5}$ NAAQS.[18]

V. Statutory and Executive Order Reviews

Under the Clean Air Act, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve State choices, provided that they meet the criteria of the Clean Air Act. Accordingly, this action merely approves State law as meeting Federal requirements and does not impose additional requirements beyond those imposed by State law. For that reason, this action:

- Is not a ''significant regulatory action'' subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 et seq.);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act; and
- Does not interfere with Executive Order 12898 (59 FR 7629 (Feb. 16, 1994)) because EPA lacks the discretionary authority to address environmental justice in this rulemaking.

In addition, this rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the State, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law. However, the Moapa Band of Paiutes did raise issues in the context of the BART determination for RGGS, which will be addressed at a future date. Region 9 engaged in formal consultation with the Moapa Band of Paiutes on August 11, 2011, and heard these issues in person. We will continue to consult with Moapa on RGGS.

[17] 40 CFR 64.7(d)(1).

[18] As noted in our proposal, 76 FR 36465, we previously approved Nevada's SIP for Interstate Transport as meeting the other requirements of CAA section 110(a)(2)(D)(i) for the 1997 8-hour ozone and 1997 $PM_{2.5}$ NAAQS. See 70 FR 41629. We are now codifying this prior approval along with our current approval under a new section entitled ''Interstate Transport.''

The Congressional Review Act, 5 U.S.C. 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this action and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by May 25, 2012. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements (see section 307(b)(2)).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen oxides, Sulfur dioxide, Particulate matter, Reporting and recordkeeping requirements, Visibility, Volatile organic compounds.

Dated: December 13, 2011.

Jared Blumenfeld,

Regional Administrator, Region 9.

Part 52, chapter I, title 40 of the Code of Federal Regulations is amended as follows:

PART 52—[AMENDED]

■ 1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart DD—Nevada

■ 2. In § 52.1470(c):

■ a. In paragraph (c), Table 1 is amended by adding an entry for ''445B.029'' after the entry for ''445B.022'', and adding entries for ''445B.22095,'' and ''445B.22096'' after the entry for ''445B.22093''.

■ 3. The table in paragraph (e) is amended by adding an entry for ''Nevada Regional Haze State Implementation Plan (October 2009)'' to the end of the table.

§ 52.1470 Identification of plan.

* * * * *

(c) * * *

TABLE 1—EPA-APPROVED NEVADA REGULATIONS

State citation	Title/subject	State effective date	EPA approval date	Additional explanation
Nevada Administrative Code, Chapter 445B, Air Controls, Air Pollution; Nevada Administrative Code, Chapter 445, Air Controls, Air Pollution; Nevada Air Quality Regulations—Definitions				
* *	*	*	*	*
445B.029	''Best available retrofit technology'' defined.	4/23/09	[Insert page number where the document begins 3/26/12].	Included in supplemental SIP revision submitted on September 20, 2011, and approved as part of approval of Nevada Regional Haze SIP.
* *	*	*	*	*
445B.22095	Emission limitation for BART	4/23/09	[Insert page number where the document begins 3/26/12].	Included in supplemental SIP revision submitted on September 20, 2011, and approved as part of approval of Nevada Regional Haze SIP.
445B.22096, excluding the NO_X emission limits and control types in sub-paragraph (1)(c).	Control measures constituting BART; limitations on emissions.	1/28/10	[Insert page number where the document begins 3/26/12].	Included in supplemental SIP revision submitted on September 20, 2011, and approved as part of approval of Nevada Regional Haze SIP. Excluding the NO_X emission limits and control types for units 1, 2 and 3 of NV Energy's Reid Gardner Generating Station.
* *	*	*	*	*

* * * * * (e) * * *

Name of SIP provision	Applicable geographic or nonattainment area	State submittal date	EPA approval date	Explanation
* *	*	*	*	* *
Nevada Regional Haze State Implementation Plan (October 2009), excluding the BART determination and the associated emission limits for NO_X at Reid Gardner Generating Station in sections 5.5.3, 5.6.3 and 7.2.	State-wide	11/18/09	[Insert page number where the document begins 3/26/12].	Excluding Appendix A (''Nevada BART Regulation''). The Nevada BART regulation, including NAC 445B.029, 445B.22095, and 445B.22096, is listed above in 40 CFR 52.1470(c).
* *	*	*	*	* *

■ 3. Section 52.1488 is amended by adding paragraph (e) to read as follows:

§ 52.1488 Visibility protection.

* * * * *

(e) *Approval.* On November 18, 2009, the Nevada Division of Environmental Protection submitted the ''Nevada Regional Haze State Implementation Plan.'' With the exception of the BART determination and the associated emission limits for NO_X at Reid Gardner Generating Station in sections 5.5.3, 5.6.3 and 7.2, the Nevada Regional Haze State Implementation Plan, as supplemented and amended on February 18, 2010 and September 20, 2011, meets the applicable requirements of Clean Air Act sections 169A and 169B and the Regional Haze Rule in 40 CFR 51.308.

■ 4. Add a new § 52.1491 to read as follows:

§ 52.1491 Interstate transport.

(a) *Approval.* On February 7, 2007, the Nevada Division of Environmental Protection submitted the ''Nevada State Implementation Plan for Interstate Transport to Satisfy the Requirements of the Clean Air Act 110(a)(2)(D)(i) for the 8-hour Ozone and $PM_{2.5}$ NAAQS Promulgated in July 1997'' (''2007 Interstate Transport SIP''). The 2007 Interstate Transport SIP meets the requirements of Clean Air Act section 110(a)(2)(D)(i) for the 1997 8-hour ozone and 1997 $PM_{2.5}$ NAAQS other than the requirements of Clean Air Act section 110(a)(2)(D)(i)(II) regarding interference with other states' measures to protect visibility.

(b) *Approval.* The requirements of Clean Air Act section 110(a)(2)(D)(i)(II) regarding interference with other states' measures to protect visibility for the 1997 8-hour ozone and 1997 $PM_{2.5}$ NAAQS are met by the ''Nevada Regional Haze State Implementation Plan,'' as supplemented and amended on February 18, 2010 and September 20, 2011.

[FR Doc. 2012–7025 Filed 3–23–12; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R03–OAR–2011–0713; FRL–9652–6]

Approval and Promulgation of Air Quality Implementation Plans; Delaware, Maryland, New Jersey, and Pennsylvania; Determinations of Attainment of the 1997 8-Hour Ozone Standard for the Philadelphia-Wilmington-Atlantic City Moderate Nonattainment Area

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is making two determinations regarding the Philadelphia-Wilmington-Atlantic City, PA–NJ–MD–DE 8-hour ozone moderate nonattainment area (the Philadelphia Area). First, EPA is determining that the Philadelphia Area has attained the 1997 8-hour ozone National Ambient Air Quality Standard (NAAQS). This determination is based upon complete, quality assured, and certified ambient air monitoring data that show the area has monitored attainment of the 1997 8-hour ozone NAAQS for the 2008–2010 monitoring period. In accordance with EPA's applicable ozone implementation rule, this clean data determination suspends the requirement for the Philadelphia Area to submit an attainment demonstration, reasonably available control measures (RACM), a reasonable further progress (RFP) plan and contingency measures related to attainment of the 1997 8-hours ozone NAAQS. These requirements shall be suspended for so long as the area continues to attain the 1997 8-hour ozone NAAQS. Second, EPA is determining that the Philadelphia Area has attained the 1997 8-hour ozone NAAQS by its attainment date of June 15, 2011. These actions are being taken under the Clean Air Act (CAA).

DATES: *Effective Date:* This final rule is effective on April 25, 2012.

ADDRESSES: EPA has established a docket for this action under Docket ID Number EPA–R03–OAR–2011–0713. All documents in the docket are listed in the *www.regulations.gov* Web site. Although listed in the electronic docket, some information is not publicly available, i.e., confidential business information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through *www.regulations.gov* or in hard copy for public inspection during normal business hours at the Air Protection Division, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103.

FOR FURTHER INFORMATION CONTACT: If you have questions concerning EPA's proposed action related to Delaware, Maryland or Pennsylvania, please contact Maria A. Pino (215) 814–2181, or by email at *pino.maria@epa.gov.* If you have questions concerning EPA's proposed action related to New Jersey, please contact Paul Truchan (212) 637–3711, or by email at *truchan.paul@epa.gov.*

SUPPLEMENTARY INFORMATION: The following outline is provided to aid in locating information in this action.

I. Background
II. Summary of Actions
III. Final Action
IV. Statutory and Executive Order Reviews

I. Background

EPA published a notice of proposed rulemaking (NPR) for the States of Delaware, Maryland, and New Jersey

and the Commonwealth of Pennsylvania (the States) on December 9, 2011 (76 FR 76929). Pursuant to section 181(b)(2)(A) [1] of the CAA, the December 9, 2011 NPR proposed to determine that the Philadelphia Area attained the 1997 8-hour ozone NAAQS by its attainment date, June 15, 2011. This proposed determination was based upon complete, quality assured, and certified ambient air monitoring data for the 2008–2010 monitoring period that show the Philadelphia Area has monitored attainment of the 1997 8-hour ozone NAAQS during this monitoring period. Preliminary ambient air monitoring data for the 2009–2011 monitoring period is consistent with continued attainment.

The December 9, 2011 NPR also proposed to make a clean data determination that the Philadelphia Area has attained the 1997 8-hour ozone NAAQS. This proposed clean data determination was based upon complete, quality assured, and certified ambient air monitoring data that show the Philadelphia Area has monitored attainment of the 1997 8-hour ozone NAAQS for the 2008–2010 monitoring period. As a result of this determination, the requirement for the Philadelphia Area to submit an attainment demonstration, a RACM analysis, an RFP plan, contingency measures, and other planning requirements related to attainment of the 1997 8-hours ozone NAAQS shall be suspended for so long as the area continues to attain the 1997 8-hour ozone NAAQS.

In that same December 9, 2011 rulemaking notice, EPA withdrew the May 8, 2009 proposed disapprovals of the attainment demonstrations for the Philadelphia Area, based on the ambient air quality monitoring data demonstrating attainment. The Docket ID Numbers for the proposed disapprovals are EPA–R03–OAR–2008–0930, EPA–R03–OAR–2008–0929, EPA–R02–OAR–2008–0497, and EPA–R03–OAR–2008–0928, respectively. *See* 74 FR 21599, 74 FR 21588, 74 FR 21578, and 74 FR 21604, respectively.

II. Summary of Actions

A. Determination of Attainment by the Attainment Date

Moderate areas are required to attain the 1997 8-hour ozone NAAQS by no later than six years after designation, or June 15, 2010. *See* 40 CFR 51.903. However, the Philadelphia Area qualified for a one-year extension of its attainment date, based on the complete, certified ambient air quality data for the 2009 ozone season. On January 21, 2011, EPA approved a one-year extension of the Philadelphia Area's attainment date, from June 15, 2010 to June 15, 2011. *See* 76 FR 3838 and 76 FR 3840.

EPA is making a determination that the Philadelphia Area has attained the 1997 ozone NAAQS by its applicable attainment date of June 15, 2011. As a result of this action, EPA has met its requirement pursuant to CAA section 181(b)(2)(A) to determine, based on the area's air quality as of the attainment date, whether the area attained the standard by that date. The effect of this final determination of attainment by the area's attainment date is to discharge EPA's obligation under CAA section 181(b)(2)(A) [2] to establish that, in accordance with CAA section 181(b)(2)(A), the area will not be reclassified for failure to attain by its applicable attainment date. This determination of attainment is not equivalent to a redesignation. The States must still meet the statutory requirements for redesignation in order to be redesignated to attainment.

B. Clean Data Determination

EPA is making a clean data determination, finding that the Philadelphia Area is attaining the 1997 8-hour ozone NAAQS. Under the provisions of EPA's ozone implementation rule (*See* 40 CFR 51.918), this clean data determination suspends the CAA requirement for the Philadelphia Area to submit certain planning requirements related to attainment of the 1997 8-hour ozone NAAQS for so long as the area continues to attain the 1997 8-hour ozone NAAQS. This clean data determination is not equivalent to a redesignation. The States must still meet the statutory requirements for redesignation in order to be redesignated to attainment.

The clean data determination suspends the requirements to submit an attainment demonstration, RACM, RFP, contingency measures, and other planning elements related to attainment of the 1997 8-hour ozone NAAQS. This suspension continues until such time, if any, that EPA (i) redesignates the area to attainment at which time those requirements no longer apply, or (ii) subsequently determines that the area has violated the 1997 8-hour ozone NAAQS. This clean data determination is separate from, and does not influence or otherwise affect, any future designation determination or requirements for the area based on any new or revised ozone NAAQS. This clean data determination remains in effect regardless of whether EPA designates the Philadelphia Area as a nonattainment area for purposes of any new or revised ozone NAAQS.

Although these requirements are suspended, EPA is not precluded from acting upon these elements. The States of Delaware and Maryland, and the Commonwealth of Pennsylvania submitted these SIP elements for their portions of the Philadelphia Area to EPA for review and approval in June 2007. The State of New Jersey submitted these SIP elements for its portion of the Philadelphia Area to EPA for review and approval in October 2007. EPA approved each state's RFP plans, RFP contingency measures, and RACM analyses for the Philadelphia Area in separate rulemaking actions. Therefore, these requirements have been fulfilled. EPA approved the RFP plans, RFP contingency measures, and RACM analyses from Delaware, Maryland, New Jersey, and Pennsylvania on April 8, 2010, June 11, 2010, May 15, 2009, and February 7, 2011, respectively. *See* 75 FR 17863, 75 FR 33172, 74 FR 22837, and 76 FR 6559.

C. Ambient Air Quality Monitoring Data

Complete, quality assured, certified 8-hour ozone air quality monitoring data for 2008 through 2010 show that the Philadelphia Area has attained the 1997 8-hour ozone NAAQS. Additional information on air quality data for the Philadelphia Area can be found in the Technical Support Document (TSD) prepared for this action. The TSD can be viewed at *http://www.regulations.gov*. The rationale for EPA's proposed action is explained in the NPR and will not be restated here. No public comments were received on the NPR.

III. Final Action

EPA is making two determinations regarding the Philadelphia Area. First, EPA is making a clean data determination, finding that the Philadelphia Area has attained the 1997 8-hour ozone NAAQS. This clean data determination is based upon complete, quality assured, and certified ambient air monitoring data that show the area has monitored attainment of the 1997 8-

[1] The NPR cited CAA sections 181(b)(2)(A) and 179(c) as giving EPA the statutory authority for determining whether the Philadelphia Area attained the 1997 8-hour ozone NAAQS by its attainment date. In this final notice, EPA is correcting that statement to clarify that here the appropriate statutory authority derives from section 181(b)(2)(A).

[2] In the NPR, EPA stated that its obligations to determine if an area attained the 1997 8-hour NAAQS by its attainment was found under CAA sections 181(b)(2)(A) and 179. EPA notes that for an area such as Philadelphia, which is designated moderate nonattainment for the 1997 8-hour ozone standard, the proper citation is CAA section 181(b)(2)(A).

hour ozone NAAQS for the 2008–2010 monitoring period. This clean data determination suspends the requirements for the Philadelphia Area to submit an attainment demonstration and associated RACM, RFP plan, contingency measures, and any other planning requirements related to attainment of the 1997 8-hours ozone NAAQS for so long as the area continues to attain the 1997 8-hour ozone NAAQS. Second, pursuant to section 181(b)(2)(A) of the CAA, EPA is making a determination that the Philadelphia Area has attained the 1997 8-hour ozone NAAQS by its attainment date, June 15, 2011.

IV. Statutory and Executive Order Reviews

A. General Requirements

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a ''significant regulatory action'' subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the state, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

B. Submission to Congress and the Comptroller General

The Congressional Review Act, 5 U.S.C. 801 *et seq.,* as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this action and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

C. Petitions for Judicial Review

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by May 25, 2012. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This determination that the Philadelphia Area has attained the 1997 8-hour ozone NAAQS may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

List of Subjects in 40 CFR part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Ozone, Reporting and recordkeeping requirements.

Dated: February 22, 2012.

W.C. Early,

Acting, Regional Administrator, Region III.

Dated: March 6, 2012.

Judith A. Enck,

Regional Administrator, Region II.

40 CFR part 52 is amended as follows:

PART 52—[AMENDED]

■ 1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart I—Delaware

■ 2. Section 52.425 is added to read as follows:

§ 52.425 Determinations of attainment.

Based upon EPA's review of the air quality data for the 3-year period 2008 to 2010, EPA determined that Philadelphia-Wilmington-Atlantic City, PA–NJ–MD–DE 8-hour ozone moderate nonattainment area (the Philadelphia Area) attained the 1997 8-hour ozone National Ambient Air Quality Standard (NAAQS) by the applicable attainment date of June 15, 2011. Therefore, EPA has met the requirement pursuant to CAA section 181(b)(2)(A) to determine, based on the area's air quality as of the attainment date, whether the area attained the standard. EPA also determined that the Philadelphia Area nonattainment area will not be reclassified for failure to attain by its applicable attainment date under section 181(b)(2)(A).

■ 3. Section 52.426 is amended by adding paragraph (i) to read as follows:

§ 52.426 Control strategy plans for attainment and rate-of-progress: ozone.

* * * * *

(i) *Determination of attainment.* EPA has determined, as of March 26, 2012, that based on 2008 to 2010 ambient air quality data, Philadelphia-Wilmington-Atlantic City, PA–NJ–MD–DE 8-hour ozone moderate nonattainment area has attained the 1997 8-hour ozone NAAQS. This determination, in accordance with 40 CFR 51.918, suspends the requirements for this area to submit an attainment demonstration, associated reasonably available control measures, a reasonable further progress plan, contingency measures, and other planning SIPs related to attainment of the standard for as long as this area continues to meet the 1997 annual 8-hour ozone NAAQS.

Subpart V—Maryland

■ 4. Section 52.1076 is amended by adding paragraph (x) to read as follows:

§ 52.1076 Control strategy plans for attainment and rate-of-progress: ozone.

* * * * *

(x) *Determination of attainment.* EPA has determined, as of March 26, 2012, that based on 2008 to 2010 ambient air quality data, Philadelphia-Wilmington-Atlantic City, PA–NJ–MD–DE 8-hour ozone moderate nonattainment area has attained the 1997 8-hour ozone NAAQS. This determination, in accordance with 40 CFR 51.918, suspends the requirements for this area to submit an attainment demonstration, associated reasonably available control measures, a reasonable further progress plan, contingency measures, and other planning SIPs related to attainment of the standard for as long as this area continues to meet the 1997 annual 8-hour ozone NAAQS.

■ 5. Section 52.1082 is amended by adding paragraph (d) to read as follows:

§ 52.1082 Determinations of attainment.

* * * * *

(d) Based upon EPA's review of the air quality data for the 3-year period 2008 to 2010, EPA determined that Philadelphia-Wilmington-Atlantic City, PA–NJ–MD–DE 8-hour ozone moderate nonattainment area (the Philadelphia Area) attained the 1997 8-hour ozone National Ambient Air Quality Standard (NAAQS) by the applicable attainment date of June 15, 2011. Therefore, EPA has met the requirement pursuant to CAA section 181(b)(2)(A) to determine, based on the area's air quality as of the attainment date, whether the area attained the standard. EPA also determined that the Philadelphia Area nonattainment area will not be reclassified for failure to attain by its applicable attainment date under section 181(b)(2)(A).

Subpart FF—New Jersey

■ 6. Section 52.1576 is added to read as follows:

§ 52.1576 Determinations of attainment.

Based upon EPA's review of the air quality data for the 3-year period 2008 to 2010, EPA determined that Philadelphia-Wilmington-Atlantic City, PA–NJ–MD–DE 8-hour ozone moderate nonattainment area (the Philadelphia Area) attained the 1997 8-hour ozone National Ambient Air Quality Standard (NAAQS) by the applicable attainment date of June 15, 2011. Therefore, EPA has met the requirement pursuant to CAA section 181(b)(2)(A) to determine, based on the area's air quality as of the attainment date, whether the area attained the standard. EPA also determined that the Philadelphia Area nonattainment area will not be reclassified for failure to attain by its applicable attainment date under section 181(b)(2)(A).

■ 7. Section 52.1582 is amended by adding paragraph (n) to read as follows:

§ 52.1582 Control strategy and regulations: Ozone.

* * * * *

(n) Attainment determination. EPA has determined, as of March 26, 2012, that based on 2008 to 2010 ambient air quality data, Philadelphia-Wilmington-Atlantic City, PA–NJ–MD–DE 8-hour ozone moderate nonattainment area has attained the 1997 8-hour ozone NAAQS. This determination, in accordance with 40 CFR 51.918, suspends the requirements for this area to submit an attainment demonstration, associated reasonably available control measures, a reasonable further progress plan, contingency measures, and other planning SIPs related to attainment of the standard for as long as this area continues to meet the 1997 annual 8-hour ozone NAAQS.

Subpart NN—Pennsylvania

■ 8. Section 52.2037 is amended by adding paragraph (r) to read as follows:

§ 52.2037 Control strategy plans for attainment and rate-of-progress: Ozone.

* * * * *

(r) *Determination of attainment.* EPA has determined, as of March 26, 2012, that based on 2008 to 2010 ambient air quality data, Philadelphia-Wilmington-Atlantic City, PA–NJ–MD–DE 8-hour ozone moderate nonattainment area has attained the 1997 8-hour ozone NAAQS. This determination, in accordance with 40 CFR 51.918, suspends the requirements for this area to submit an attainment demonstration, associated reasonably available control measures, a reasonable further progress plan, contingency measures, and other planning SIPs related to attainment of the standard for as long as this area continues to meet the 1997 annual 8-hour ozone NAAQS.

■ 9. Section 52.2056 is amended by adding paragraph (f) to read as follows:

§ 52.2056 Determinations of attainment.

* * * * *

(f) Based upon EPA's review of the air quality data for the 3-year period 2008 to 2010, EPA determined that Philadelphia-Wilmington-Atlantic City, PA–NJ–MD–DE 8-hour ozone moderate nonattainment area (the Philadelphia Area) attained the 1997 8-hour ozone National Ambient Air Quality Standard (NAAQS) by the applicable attainment date of June 15, 2011. Therefore, EPA has met the requirement pursuant to CAA section 181(b)(2)(A) to determine, based on the area's air quality as of the attainment date, whether the area attained the standard. EPA also determined that the Philadelphia Area nonattainment area will not be reclassified for failure to attain by its applicable attainment date under section 181(b)(2)(A).

[FR Doc. 2012–7196 Filed 3–23–12; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 82

[EPA–HQ–OAR–2011–0776; FRL–9651–3]

RIN–2060–AR20

Protection of Stratospheric Ozone: Amendment to HFO-1234yf SNAP Rule for Motor Vehicle Air Conditioning Sector

AGENCY: Environmental Protection Agency.

ACTION: Direct final rule.

SUMMARY: The U.S. Environmental Protection Agency (EPA) is taking direct final action to revise one of the use conditions required for use of hydrofluoroolefin (HFO)-1234yf (2,3,3,3-tetrafluoroprop-1-ene), a substitute for ozone-depleting substances (ODSs) in the motor vehicle air conditioning end-use within the refrigeration and air conditioning sector, to be acceptable subject to use conditions under EPA's Significant New Alternatives Policy (SNAP) program. The revised use condition incorporates by reference a revised standard from SAE International.

DATES: This rule is effective on May 21, 2012 without further notice, unless EPA receives adverse comment or receives a request for a public hearing by April 23, 2012. If we receive adverse comment or a request for a public hearing, we will publish a timely withdrawal in the **Federal Register** informing the public that all or part of this rule will not take effect. The incorporation by reference of certain publications listed in the rule is approved by the Director of the Federal Register as of May 21, 2012.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA- HQ–OAR- 2011–0776 by one of the following methods:

- *www.regulations.gov:* Follow the on-line instructions for submitting comments.
- *Email:* Comments may be sent by electronic mail (email) to *a-and-r-*

docket@epa.gov, Attention EPA–HQ–OAR–2011–0776.

• *Mail:* OAR Docket and Information Center, U.S. Environmental Protection Agency, Mailcode 6102T, 1200 Pennsylvania Ave. NW., Washington, DC 20460. To expedite review, a second copy of the comments should be sent to Margaret Sheppard at the address listed below under **FOR FURTHER INFORMATION CONTACT**.

• *Hand Delivery:* Air and Radiation Docket, EPA/DC, EPA West, Room 3334, 1301 Constitution Ave. NW., Washington, DC 20004. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA–HQ–OAR–2011–0776. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at *www.regulations.gov,* including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through *www.regulations.gov* or email. The *www.regulations.gov* Web site is an ''anonymous access'' system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to EPA without going through *www.regulations.gov* your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA's public docket, visit the EPA Docket Center homepage at *http://www.epa.gov/epahome/dockets.htm.*

Docket: All documents in the docket are listed in the *www.regulations.gov* index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically through *www.regulations.gov* or in hard copy at the Air and Radiation Docket, EPA/DC, EPA West, Room 3334, 1301 Constitution Ave. NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the Air and Radiation Docket is (202) 566–1742.

EPA has established a public docket for this action under Docket ID No. EPA–HQ–OAR–2011–0776. All documents in the docket are listed on the *www.regulations.gov* Web site. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through *www.regulations.gov* or in hard copy at the Air and Radiation Docket, EPA/DC, EPA West, Room 3334, 1301 Constitution Ave. NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the Air and Radiation Docket is (202) 566–1742.

FOR FURTHER INFORMATION CONTACT: Margaret Sheppard, Stratospheric Protection Division, Office of Atmospheric Programs; Environmental Protection Agency, Mail Code 6205J, 1200 Pennsylvania Avenue NW., Washington DC 20460; telephone number (202) 343–9163, fax number, (202) 343–2338; email address at *sheppard.margaret@epa.gov.* The published versions of notices and rulemakings under the SNAP program are available on EPA's Stratospheric Ozone Web site at *http://www.epa.gov/ozone/snap/regs.* The full list of SNAP decisions in all industrial sectors is available at *http://www.epa.gov/ozone/snap.*

SUPPLEMENTARY INFORMATION: EPA is publishing this rule without a prior proposed rule because we view this as a noncontroversial action and anticipate no adverse comment. We are revising an existing use condition for hydrofluoroolefin (HFO)-1234yf (2,3,3,3-tetrafluoroprop-1-ene) in motor vehicle air conditioning (MVAC) by incorporating by reference an updated edition of a standard from SAE International and clarifying the scope of the use condition. EPA previously listed HFO-1234yf as acceptable, subject to use conditions, for use in MVAC systems in new passenger cars and light-duty trucks (March 29, 2011; 76 FR 17488). This action does not place any significant burden on the regulated community and ensures consistency with standard industry practices.

In the ''Proposed Rules'' section of today's **Federal Register**, we are publishing a separate document that will serve as the proposed rule to revise a use condition for HFO-1234yf in MVAC to incorporate by reference an updated standard and clarify the scope of the use condition, if adverse comments are received or a public hearing is requested on this direct final rule. We will not institute a second comment period on this action. Any parties interested in commenting must do so at this time. For further information about commenting on this rule, see the **ADDRESSES** section of this document. If EPA receives adverse comment or a request for a public hearing, we will publish a timely withdrawal in the **Federal Register** informing the public that this direct final rule will not take effect. We would address all public comments in any subsequent final rule based on the proposed rule.

You may claim that information in your comments is confidential business information (CBI), as allowed by 40 CFR Part 2. If you submit comments and include information that you claim as CBI, we request that you submit them directly to Margaret Sheppard at the address under **FOR FURTHER INFORMATION CONTACT** in two versions: One clearly marked ''Public'' to be filed in the Public Docket, and the other marked ''Confidential'' to be reviewed by authorized government personnel only. This information will remain confidential unless EPA determines, in accordance with 40 CFR part 2, subpart B, that the information is not subject to protection as CBI.

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I. Does this action apply to me?

This final rule regulates the use of the chemical HFO-1234yf (2,3,3,3-tetrafluoroprop-1-ene, Chemical Abstracts Service Registry Number [CAS Reg. No.] 754–12–1) as a refrigerant in new motor vehicle air conditioning (MVAC) systems in new passenger cars and light-duty trucks. Businesses in this end-use that might want to use HFO-1234yf in new MVAC systems in the future include:

- Automobile manufacturers
- Automobile repair shops

Regulated entities may include:

TABLE 1—POTENTIALLY REGULATED ENTITIES, BY NORTH AMERICAN INDUSTRIAL CLASSIFICATION SYSTEM (NAICS) CODE

Category	NAICS code	Description of regulated entities
Industry	336111	Automobile Manufacturing.
Services	811111	General Automotive Repair.

This table is not intended to be exhaustive, but rather a guide regarding entities likely to be regulated by this action. If you have any questions about whether this action applies to a particular entity, consult the person listed in the preceding section, **FOR FURTHER INFORMATION CONTACT**.

II. How and why is EPA revising a use condition for HFO-1234yf in MVAC?

EPA's Significant New Alternatives Policy (SNAP) program has a long-standing approach of requiring unique fittings for use with each refrigerant substitute for CFC-12 in MVAC systems. This is intended to prevent cross-contamination of different refrigerants, preserve the purity of recycled refrigerants, and ultimately to avoid venting of refrigerant. In the 1996 SNAP rule requiring the use of fittings on all refrigerants submitted for the use in MVAC systems, EPA urged industry to develop mechanisms to ensure that the refrigerant venting prohibition under Clean Air Act (CAA) Section 608 and 40 CFR 82.154 is observed (61 FR 54032; October 16, 1996). EPA has issued multiple rules codified in the Code of Federal Regulations (CFR) requiring the use of fittings unique to a refrigerant for use on ''containers of the refrigerant, on can taps, on recovery, recycling, and charging equipment, and on all [motor vehicle] air conditioning system service ports.'' (See, e.g., appendices C and D to subpart G of 40 CFR part 82)

On March 29, 2011, EPA listed HFO-1234yf as acceptable, subject to use conditions, for use in MVAC systems in new passenger cars and light-duty trucks (76 FR 17488). The use conditions contain two requirements for unique fittings to be used with the refrigerant containers for HFO-1234yf. First, the rule requires the use of the unique fittings, specified in SAE International [1] (herein after, SAE) standard J639 (February 2011 edition), for use on the MVAC high-side and low-side service ports. Second, the rule requires use of fittings consistent with SAE J2844 (February 2011 edition) for connections with refrigerant containers of 20 lbs (9L) or greater. The March 2011 final rule does not allow for use of HFO-1234yf with small can taps because the refrigerant manufacturer had not submitted such fittings for EPA's review and no industry standards address fittings appropriate for use with small cans or containers of refrigerant (i.e., less than 5 lbs). (76 FR 17494–17495)

In this direct final rule, we are revising the requirement for the unique fitting (also known as a connection or coupler) to be used with large refrigerant containers. The new requirement is that containers of HFO-1234yf for use in professional servicing [2] of MVAC systems must be used with fittings consistent with SAE J2844 (October 2011 edition). The fitting provided in the October 2011 edition of SAE J2844 is a left-handed screw valve with a diameter of 0.5 inches and Acme (trapezoidal) thread with 16 threads per inch. We are clarifying that this unique fitting requirement applies only to containers of HFO-1234yf for professional servicing of MVAC systems and does not apply to containers for industrial transfers, e.g., within a chemical manufacturing company or for delivery to automobile manufacturers, which use containers larger than 50 lbs or 23 L.

EPA recognizes that the fitting in the October 2011 edition of SAE J2844 is not ''unique'' in its direction and diameter, as per the criteria for uniqueness mentioned in appendix H to subpart G of 40 CFR part 82. However, the Acme thread has a trapezoidal shape that makes it impossible to cross-connect this fitting with others already identified with the same thread direction and diameter which use different shaped thread. Therefore, we find this fitting to be unique, and we are allowing its use on refrigerant containers of HFO-1234yf used for professional servicing.

A. Revised Standard SAE J2844

SAE International first established the standard SAE J2844, ''R-1234yf (HFO-1234yf) New Refrigerant Purity and Container Requirements for Use in Mobile Air-Conditioning Systems'' in February 2011. Shortly thereafter, the committee responsible for this standard decided that revisions to the standard were appropriate (June 13, 2011 Letter from K. Horen, Honeywell). In particular, the committee decided that the original ''quick-connect'' type fitting addressed in the February 2011 edition of SAE J2844 for refrigerant containers for servicing should be replaced by a screw-type valve. Quick-connect fittings are more likely to become dislodged and to release refrigerant without warning to the service technician. In contrast, if a screw-type valve is not properly

[1] Formerly, the Society of Automotive Engineers.

[2] Consistent with Subpart B to 40 CFR Part 82, professional servicing involves being paid to perform service, whether it is for cash, credit, goods or services.

connected and is releasing refrigerant, there is an audible hiss of released refrigerant that may give warning to a service technician. SAE revised the J2844 standard in October 2011 to specify a different, screw-type valve fitting for refrigerant containers to be used for MVAC servicing.

We believe that incorporating the revised industry standard is consistent with the Clean Air Act and, as described above, we believe that the fitting in the revised industry standard is unique even though it does not meet all of the criteria specified in appendix H to subpart G of 40 CFR part 82. Further, the new fittings adopted in the revised standard may have an environmental benefit by reducing the chance that an entire container of refrigerant could leak without detection. Therefore, we are revising the use condition to reference the October 2011 edition of the SAE J2844 standard for purposes of the fittings for large containers of HFO-1234yf for use in professional servicing.

B. Clarification of Scope of Requirement for Unique Fittings on Refrigerant Containers

During implementation of the March 2011 final rule, manufacturers of the refrigerant HFO-1234yf contacted EPA, asking for clarification of the fitting requirement for refrigerant containers. One manufacturer stated, based on its understanding, that this requirement was for containers for ''professional service or service for consideration'' and asked for clarification of this point (June 22, 2011 Letter from S. Bernhardt, Honeywell). Further, the manufacturer stated that, for cylinders greater than 50 lbs, it planned to use a specific fitting approved by the Cylinder Gas Association (CGA 670 fitting), and for cylinders greater than 450 lbs, industrial fittings would be used (June 13, 2011 Letter from K. Horen, Honeywell). Manufacturers expressed concerns that the quick-connect fitting in SAE standard J2844 (February 2011 edition) incorporated by reference in the final rule was not robust enough to use with large refrigerant containers, particularly containers used for industrial transfer or for bulk packing sent to automobile manufacturers for initial filling of MVAC systems.

In this direct final rule, we clarify that the requirement for the unique fittings on refrigerant containers of HFO-1234yf applies to containers for use for professional servicing. In the ''Further Information'' column of our decision, we state that, for HFO-1234yf, refrigerant containers for use in professional servicing are from 5 lbs to 50 lbs in size. Based on information from the refrigerant manufacturer, containers larger than 50 lbs would not be intended for use in professional servicing (June 13, 2011 Letter from K. Horen, Honeywell). We expect that refrigerant containers for HFO-1234yf larger than 50 lbs, with a volume larger than 23 liters, are used for transport and industrial transfer of refrigerant, rather than for servicing. Under section 4.1.1.2 of SAE J2844 (October 2011 edition), such cylinders are required to ''comply with the fitting requirements specified by applicable transportation rules and laws.''

EPA's concerns at the time it first established the requirement for unique fittings for MVAC substitutes were (1) the potential for cross-contamination of refrigerant due to mixing and (2) the need for purity of recycled refrigerant (61 FR 54033). We are also concerned about unintended incentives for intentional venting because contaminated refrigerant would no longer be of economic value and because separation or destruction of cross-contaminated refrigerant costs more than venting. These are concerns that primarily are implicated during servicing of the MVAC system. It is far more likely that a technician might intentionally or unintentionally try to charge equipment with a different refrigerant during servicing of an MVAC system than that someone would transfer a refrigerant to a very large container (i.e., larger than 50 lbs) containing a different refrigerant. Thus, we clarify that the requirement for a unique fitting for containers of HFO-1234yf applies to containers to be used for professional servicing (sizes of 5 to 50 lbs).

Finally, we note that our final rule listing HFO-1234yf as acceptable subject to use conditions did not apply to small containers. The refrigerant manufacturer would need to submit a unique fitting specifically for use with small can taps and small refrigerant containers before EPA could determine whether to find use of such small containers acceptable under SNAP. In addition, such containers could not be sold until a significant new use notice is submitted to EPA, consistent with EPA's final significant new use rule for HFO-1234yf under the Toxic Substances Control Act (October 27, 2010; 75 FR 65987).

III. How does the SNAP program work?

A. What are the statutory requirements and authority for the SNAP program?

CAA Section 612 requires EPA to develop a program for evaluating alternatives to ozone-depleting substances (ODS). EPA refers to this program as the SNAP program. The major provisions of Section 612 are:

1. Rulemaking

Section 612(c) requires EPA to promulgate rules making it unlawful to replace any class I substance (i.e., chlorofluorocarbon, halon, carbon tetrachloride, methyl chloroform, methyl bromide, and hydrobromofluorocarbon) or class II substance (i.e., hydrochlorofluorocarbon) with any substitute that the Administrator determines may present adverse effects to human health or the environment where the Administrator has identified an alternative that (1) reduces the overall risk to human health and the environment, and (2) is currently or potentially available.

2. Listing of Unacceptable/Acceptable Substitutes

Section 612(c) requires EPA to publish a list of the substitutes unacceptable for specific uses and to publish a corresponding list of acceptable alternatives for specific uses. The list of acceptable substitutes is found at *http://www.epa.gov/ozone/snap/lists/index.html* and the lists of substitutes that are ''unacceptable,'' ''acceptable subject to use conditions,'' and ''acceptable subject to narrowed use limits'' are in subpart G of 40 CFR part 82.

3. Petition Process

Section 612(d) grants the right to any person to petition EPA to add a substance to, or delete a substance from, the lists published in accordance with Section 612(c). The Agency has 90 days to grant or deny a petition. Where the Agency grants the petition, EPA must publish the revised lists within an additional six months.

4. 90-day Notification

Section 612(e) directs EPA to require any person who produces a chemical substitute for a class I substance to notify the Agency not less than 90 days before new or existing chemicals are introduced into interstate commerce for significant new uses as substitutes for a class I substance. The producer must also provide the Agency with the producer's unpublished health and safety studies on such substitutes.

5. Outreach

Section 612(b)(1) states that the Administrator shall seek to maximize the use of federal research facilities and resources to assist users of class I and II substances in identifying and developing alternatives to the use of

such substances in key commercial applications.

6. Clearinghouse

Section 612(b)(4) requires the Agency to set up a public clearinghouse of alternative chemicals, product substitutes, and alternative manufacturing processes that are available for products and manufacturing processes which use class I and II substances.

B. What are EPA's regulations implementing Section 612?

On March 18, 1994, EPA published the original rulemaking (59 FR 13044) which established the process for administering the SNAP program and issued EPA's first lists identifying acceptable and unacceptable substitutes in the major industrial use sectors (subpart G of 40 CFR part 82). These sectors—refrigeration and air conditioning; foam blowing; cleaning solvents; fire suppression and explosion protection; sterilants; aerosols; adhesives, coatings and inks; and tobacco expansion—are the principal industrial sectors that historically consumed the largest volumes of ODS.

CAA Section 612 requires EPA to ensure that substitutes found acceptable do not present a significantly greater risk to human health and the environment than other substitutes that are currently or potentially available.

C. How do the regulations for the SNAP program work?

Under the SNAP regulations, anyone who plans to market or produce a substitute to replace a class I substance or class II substance in one of the eight major industrial use sectors must provide notice to the Agency, including health and safety information on the substitute, at least 90 days before introducing it into interstate commerce for significant new use as an alternative. This requirement applies to the persons planning to introduce the substitute into interstate commerce,[3] which typically are chemical manufacturers, but may also include importers, formulators, equipment manufacturers, or end-users.[4] The regulations identify certain narrow exemptions from the notification requirement, such as research and development and test marketing (40 CFR 82.176(b)(4) and (5), respectively).

The Agency has identified four possible decision categories for substitutes that are submitted for evaluation: acceptable; acceptable subject to use conditions; acceptable subject to narrowed use limits; and unacceptable (40 CFR 82.180(b)). Use conditions and narrowed use limits are both considered ''use restrictions'' and are explained in the paragraphs below. Substitutes that are deemed acceptable with no use restrictions (no use conditions or narrowed use limits) can be used for all applications within the relevant end-uses within the sector.

After reviewing a substitute, the Agency may determine that a substitute is acceptable only if certain conditions in the way that the substitute is used are met to minimize risks to human health and the environment. EPA describes such substitutes as ''acceptable subject to use conditions.'' Entities that use these substitutes without meeting the associated use conditions are in violation of EPA's SNAP regulations.

For some substitutes, the Agency may permit a narrowed range of use within an end-use or sector. For example, the Agency may limit the use of a substitute to certain end-uses or specific applications within an industry sector. EPA describes these substitutes as ''acceptable subject to narrowed use limits.'' The Agency requires the user of a narrowed-use substitute to demonstrate that no other acceptable substitutes are available for the specific application by conducting comprehensive studies. A person using a substitute that is acceptable subject to narrowed use limits in applications and end-uses that are not consistent with the narrowed use limit is using the substitute in an unacceptable manner and is in violation of Section 612 of the CAA and EPA's SNAP regulations.

The Agency publishes its SNAP program decisions in the **Federal Register** (FR). EPA publishes decisions concerning substitutes that are deemed acceptable subject to use restrictions (use conditions and/or narrowed use limits), or for substitutes deemed unacceptable, as proposed rulemakings to provide the public with an opportunity to comment, before publishing final decisions.

In contrast, EPA publishes decisions concerning substitutes that are deemed acceptable with no restrictions in ''notices of acceptability,'' rather than as proposed and final rules. As described in the March 18, 1994, rule initially implementing the SNAP program, EPA does not believe that rulemaking procedures are necessary to list alternatives that are acceptable without restrictions because such listings neither impose any sanction nor prevent anyone from using a substitute (59 FR 13047).

Many SNAP listings include ''Comments'' or ''Further Information'' to provide additional information on substitutes. Since this additional information is not part of the regulatory decision, these statements are not binding for use of the substitute under the SNAP program. However, regulatory requirements so listed are binding under other regulatory programs (e.g., worker protection regulations promulgated by the Occupational Safety and Health Administration (OSHA)). The ''Further Information'' classification does not necessarily include all other legal obligations pertaining to the use of the substitute. While the items listed are not legally binding under the SNAP program, EPA encourages users of substitutes to apply all statements in the ''Further Information'' column in their use of these substitutes. In many instances, the information simply refers to sound operating practices that have already been identified in existing industry and/or building codes or standards. Thus many of the statements, if adopted, would not require the affected user to make significant changes in existing operating practices.

D. Where can I get additional information about the SNAP program?

For copies of the comprehensive SNAP lists of substitutes or additional information on SNAP, refer to EPA's Ozone Depletion Web site at: *www.epa.gov/ozone/snap/index.html.* For more information on the Agency's process for administering the SNAP program or criteria for evaluation of substitutes, refer to the SNAP final rulemaking published March 18, 1994 (59 FR 13044), codified at 40 CFR part 82, subpart G. A complete chronology of SNAP decisions and the appropriate citations is found at: *http://www.epa.gov/ozone/snap/chron.html.*

IV. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a ''significant regulatory action'' under the terms of

[3] As defined at 40 CFR 82.104, ''interstate commerce'' means the distribution or transportation of any product between one state, territory, possession or the District of Columbia, and another state, territory, possession or the District of Columbia, or the sale, use or manufacture of any product in more than one state, territory, possession or District of Columbia. The entry points for which a product is introduced into interstate commerce are the release of a product from the facility in which the product was manufactured, the entry into a warehouse from which the domestic manufacturer releases the product for sale or distribution, and at the site of United States Customs clearance.

[4] As defined at 40 CFR 82.172, ''end-use'' means processes or classes of specific applications within major industrial sectors where a substitute is used to replace an ODS.

Executive Order 12866 (58 FR 51735, October 4, 1993) and is therefore not subject to review under Executive Orders 12866 and 13563 (76 FR 3821, January 21, 2011).

B. Paperwork Reduction Act

This action does not impose any new information collection burden. It contains no new requirements for reporting. However, the Office of Management and Budget (OMB) has previously approved the information collection requirements contained in the existing regulations in subpart G of 40 CFR part 82 under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* and has assigned OMB control numbers 2060–0226 (EPA ICR No. 1596.08). This Information Collection Request (ICR) included five types of respondent reporting and recordkeeping activities pursuant to SNAP regulations: submission of a SNAP petition, filing a SNAP/TSCA Addendum, notification for test marketing activity, recordkeeping for substitutes acceptable subject to use restrictions, and recordkeeping for small volume uses. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9.

C. Regulatory Flexibility Act (RFA)

The RFA generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statutes unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today's rule on small entities, small entity is defined as: (1) A small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; for NAICS code 336111 (Automobile manufacturing), a small business has <1000 employees; for NAICS code 336391 (Motor Vehicle Air-Conditioning Manufacturing), a small business has <750 employees; and for NAICS code 811111 (General Automotive Repair), a small business has annual receipts of less than $7.0 million (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. The small entities directly regulated by this final rule are small businesses involved in automotive repair. This final rule will not impose any requirements on small entities beyond current industry practices. Today's action effectively ensures consistency with current industry practices, whereas without these revisions, small businesses would need to reconcile differences between EPA regulations and industry standards.

It is not clear that there would be any cost differential between these new unique fittings, those used with the current automotive refrigerant, HFC-134a, or other fittings that the automotive industry could adopt instead. It is possible that the fittings required in the revised use condition will be less expensive than those required in the March 29, 2011 final rule because they are a standard shape and size easily produced in a metal-working shop. Thus, cost impacts of this final rule on small entities are expected to be small. This final rule is expected to relieve burden for some small entities, such as automotive repair shops, by avoiding confusion over which fittings to use and by using a more robust fitting that allows quick detection of any leaks from the valve.

Although this final rule will not have a significant economic impact on a substantial number of small entities, EPA nonetheless has tried to reduce the impact of this rule on small entities. EPA has worked together with SAE International and with groups representing professional service technicians such as the Mobile Air Conditioning Society Worldwide, which conducts regular outreach with technicians and owners of small businesses such as retail refrigerant suppliers and automobile repair shops.

D. Unfunded Mandates Reform Act

This rule does not contain a Federal mandate that may result in expenditures of $100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any one year. This final rule will not impose any requirements beyond current industry practices, and thus, compliance costs are expected to be small. Thus, this rule is not subject to the requirements of sections 202 or 205 of UMRA.

This rule is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. The requirements of this rule apply to the servicing of motor vehicle air conditioning systems. The requirements of this rule for unique fittings are expected to be comparable in cost to those of current fittings. Requirements would be the same as those imposed on any other entity performing servicing on motor vehicle air conditioning systems.

E. Executive Order 13132: Federalism

This final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This regulation applies directly to facilities that use these substances and not to governmental entities. Thus, Executive Order 13132 does not apply to this rule.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). It does not significantly or uniquely affect the communities of Indian tribal governments, because this regulation applies directly to facilities that use these substances and not to governmental entities. Thus, Executive Order 13175 does not apply to this action.

G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

This action is not subject to EO 13045 (62 FR 19885, April 23, 1997) because it is not economically significant as defined in EO 12866, and because the Agency does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. This action only concerns allowing use of a specific fitting that may reduce technician's exposure in the course of professional servicing of MVAC systems. Therefore, we did not conduct further health or risk assessments beyond those in the original rulemaking (March 29, 2011; 76 FR 17488).

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211 (66 FR 28355 (May 22, 2001)), because it is not a significant

regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law 104–113, Section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This rulemaking involves technical standards. EPA has decided to use SAE International's SAE J2844 standard, ''R-1234yf (HFO-1234yf) New Refrigerant Purity and Container Requirements for Use in Mobile Air-Conditioning Systems''. This standard can be obtained from *http://www.sae.org/technical/standards/*. This standard addresses, among other things, appropriate fittings and other requirements for refrigerant containers for use in professional servicing of MVAC systems using the alternative refrigerant HFO-1234yf.

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order (EO) 12898 (59 FR 7629 (Feb. 16, 1994)) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

EPA has determined that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it does not affect the level of protection provided to human health or the environment. This final rule requires specific use conditions for unique fittings for use with refrigerant containers for professional servicing of MVAC systems, for those servicing MVAC systems using this low GWP refrigerant alternative. It does not directly affect the amount of exposure to or emissions of HFO-1234yf expected.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.,* as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A Major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2). This rule will be effective May 21, 2012.

List of Subjects in 40 CFR Part 82

Environmental protection, Administrative practice and procedure, Air pollution control, Incorporation by reference, Reporting and recordkeeping requirements, Stratospheric ozone layer.

Dated: March 15, 2012.

Lisa P. Jackson,

Administrator.

For the reasons set out in the preamble, 40 CFR part 82 is amended as follows:

PART 82—PROTECTION OF STRATOSPHERIC OZONE

■ 1. The authority citation for Part 82 continues to read as follows:

Authority: 42 U.S.C. 7414, 7601, 7671–7671q.

Subpart G—Significant New Alternatives Policy Program

■ 2. Appendix B to subpart G of part 82 is amended by revising the entry for the substitute HFO–1234yf and by revising a note at the end of the first table to read as follows:

Appendix B to Subpart G of Part 82—Substitutes Subject to Use Restrictions and Unacceptable Substitutes

REFRIGERANTS—ACCEPTABLE SUBJECT TO USE CONDITIONS

Application	Substitute	Decision	Conditions	Comments
*	*	*	* *	* *
CFC-12 Automobile Motor Vehicle Air Conditioning (New equipment in passenger cars and light-duty trucks only).	HFO-1234yf as a substitute for CFC-12.	Acceptable subject to use conditions.	Manufacturers must adhere to all of the safety requirements listed in the Society of Automotive Engineers (SAE) Standard J639 (adopted 2011), including requirements for: unique fittings, flammable refrigerant warning label, high-pressure compressor cutoff switch and pressure relief devices. For connections with refrigerant containers for use in professional servicing (that is, service for consideration, consistent with subpart B to 40 CFR part 82), use fittings consistent with SAE J2844 (revised October 2011).	Additional training for service technicians recommended. Observe requirements of Significant New Use Rule at 40 CFR 721.10182. HFO-1234yf is also known as 2,3,3,3-tetrafluoro-prop-1-ene (CAS No 754–12–1). Refrigerant containers of HFO-1234yf for use in professional servicing are from 5 lbs (2.3 L) to 50 lbs (23 L) in size. Requirements for handling, storage, and transportation of compressed gases apply to this refrigerant, such as regulations of the Occupational Safety and Health Administration at 29 CFR 1910.101 and the Department of Transportation's requirements at 49 CFR 171–179.
			Manufacturers must conduct Failure Mode and Effect Analysis (FMEA) as provided in SAE J1739 (adopted 2009). Manufacturers must keep the FMEA on file for at least three years from the date of creation.	Requirements for handling, storage, and transportation of compressed gases apply to this refrigerant, such as regulations of the Occupational Safety and Health Administration at 29 CFR 1910.101 and the Department of Transportation's requirements at 49 CFR 171–179.
*	*	*	* *	* *

Note: The use conditions in this appendix contain references to certain standards from SAE International. The standards are incorporated by reference and the referenced sections are made part of the regulations in part 82:

1. SAE J639. Safety Standards for Motor Vehicle Refrigerant Vapor Compression Systems. Revised February 2011. SAE International.
2. SAE J1739 JAN2009. Potential Failure Mode and Effects Analysis in Design (Design FMEA), Potential Failure Mode and Effects Analysis in Manufacturing and Assembly Processes (Process FMEA). Revised January 2009. SAE International.
3. SAE J2844 OCT2011. R–1234yf (HFO–1234yf) New Refrigerant Purity and Container Requirements for Use in Mobile Air-Conditioning Systems. Revised October 2011. SAE International.

The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may obtain a copy from SAE Customer Service, 400 Commonwealth Drive, Warrendale, PA 15096–0001 USA; email: *CustomerService@sae.org;* Telephone: 1–877–606–7323 (U.S. and Canada only) or 1–724–776–4970 (outside the U.S. and Canada); Internet address: *http://store.sae.org/dlabout.htm*. You may inspect a copy at U.S. EPA's Air Docket; EPA West Building, Room 3334; 1301 Constitution Ave. NW.; Washington, DC or at the National Archives and Records Administration (NARA). For questions regarding access to these standards, the telephone number of EPA's Air Docket is 202–566–1742. For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_ locations.html*.

* * * * *

[FR Doc. 2012–6916 Filed 3–22–12; 4:15 pm]

BILLING CODE 6560–50–P

DEPARTMENT OF DEFENSE

GENERAL SERVICES ADMINISTRATION

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

48 CFR Part 52

[FAC 2005–56; FAR Case 2010–015; Item I; Docket 2010–0015, Sequence 1]

RIN 9000–AL97

Federal Acquisition Regulation; Women-Owned Small Business (WOSB) Program

Correction

In rule document 2012–4475 appearing on pages 12913 through 12924 in the issue of Friday, March 2, 2012 make the following correction. On page 12918, Part 52—Solicitation Provisions and Contract Clauses, is reprinted in its entirety due to numerous errors. It should appear as follows:

PART 52—SOLICITATION PROVISIONS AND CONTRACT CLAUSES

■ 12. Amend section 52.212–3 by revising the date of the provision and paragraphs (c)(6)(ii), (c)(7)(i), and (c)(7)(ii) to read as follows:

52.212–3 Offeror Representations and Certifications—Commercial Items.

* * * * *

Offeror Representations and Certifications—Commercial Items (APR 2012)

* * * * *

(c) * * *

(6) * * *

(ii) It □ is, □ is not a joint venture that complies with the requirements of 13 CFR part 127, and the representation in paragraph (c)(6)(i) of this provision is accurate for each WOSB concern eligible under the WOSB Program participating in the joint venture. [*The offeror shall enter the name or names of the WOSB concern eligible under the WOSB Program and other small businesses that are participating in the joint venture:* _____.] Each WOSB concern eligible under the WOSB Program participating in the joint venture shall submit a separate signed copy of the WOSB representation.

(7) * * *

(i) It □ is, □ is not an EDWOSB concern, has provided all the required documents to the WOSB Repository, and no change in circumstances or adverse decisions have been issued that affects its eligibility; and

(ii) It □ is, □ is not a joint venture that complies with the requirements of 13 CFR part 127, and the representation in paragraph (c)(7)(i) of this provision is accurate for each EDWOSB concern participating in the joint venture. [*The offeror shall enter the name or names of the EDWOSB concern and other small businesses that are participating in the joint venture:* _____.] Each EDWOSB concern participating in the joint venture shall submit a separate signed copy of the EDWOSB representation.

* * * * *

■ 13. Amend section 52.212–5 by revising the date of the clause and paragraphs (b)(24) and (b)(25) to read as follows:

52.212–5 Contract Terms and Conditions Required to Implement Statutes or Executive Orders—Commercial Items.

* * * * *

Contract Terms and Conditions Required to Implement Statutes or Executive Orders—Commercial Items (APR 2012)

* * * * *

(b) * * *

__ (24) 52.219–29, Notice of Set-Aside for Economically Disadvantaged Women-Owned Small Business (EDWOSB) Concerns (APR 2012) (15 U.S.C. 637(m)).

__ (25) 52.219–30, Notice of Set-Aside for Women-Owned Small Business (WOSB) Concerns Eligible Under the WOSB Program (APR 2012) (15 U.S.C. 637(m)).

* * * * *

■ 14. Amend section 52.219–1 by revising the date of the provision and paragraphs (b)(4)(ii) and (b)(5)(ii) to read as follows:

52.219–1 Small Business Program Representations.

* * * * *

Small Business Program Representations (APR 2012)

* * * * *

(b) * * *

(4) * * *

(ii) It □ is, □ is not a joint venture that complies with the requirements of 13 CFR part 127, and the representation in paragraph (b)(4)(i) of this provision is accurate for each WOSB concern eligible under the WOSB Program participating in the joint venture. [*The offeror shall enter the name or names of the WOSB concern eligible under the WOSB Program and other small businesses that are participating in the joint venture:* _____.] Each WOSB concern eligible under the WOSB Program participating in the joint venture shall submit a separate signed copy of the WOSB representation.

(5) * * *

(ii) It □ is, □ is not a joint venture that complies with the requirements of 13 CFR part 127, and the representation in paragraph (b)(5)(i) of this provision is accurate for each EDWOSB concern participating in the joint venture. [*The offeror shall enter the name or names of the EDWOSB concern and other small businesses that are participating in the joint venture:* _____.] Each EDWOSB concern participating in the joint venture shall submit a separate signed copy of the EDWOSB representation.

* * * * *

■ 15. Amend section 52.219–29 by—

■ a. Revising the date of the clause;

■ b. Removing from paragraph (c)(3) ''EDWOSB concern'' and adding ''apparent successful offeror'' in its place; and

■ c. Removing from paragraph (f) ''An EDWOSB that'' and adding ''An EDWOSB concern that'' in its place.

The revised text reads as follows:

52.219–29 Notice of Set-Aside for Economically Disadvantaged Women-Owned Small Business Concerns.

* * * * *

Notice of Set-Aside for Economically Disadvantaged Women-Owned Small Business Concerns (APR 2012)

* * * * *

■ 16. Amend section 52.219–30 by—

■ a. Revising the date of the clause, paragraph (c), and the introductory text of paragraphs (d) and (e);

■ b. Removing from paragraph (e)(2) ''concern;'' and adding ''concern eligible under the WOSB Program;'' in its place;

■ c. Removing from paragraph (e)(3)(ii) ''WOSB as'' and adding ''WOSB concern eligible under the WOSB Program as'' in its place;

■ d. Revising paragraph (e)(5); and

■ e. Removing from paragraph (f) ''WOSB that'' and adding ''WOSB concern eligible under the WOSB Program that'' in its place.

The revised text reads as follows:

52.219–30 Notice of Set-Aside for Women-Owned Small Business Concerns Eligible Under the Women-Owned Small Business Program.

* * * * *

Notice of Set-Aside for Women-Owned Small Business Concerns Eligible Under the Women-Owned Small Business Program (APR 2012)

* * * * *

(c) *General.* (1) Offers are solicited only from WOSB concerns eligible under the WOSB Program. Offers received from concerns that are not WOSB concerns eligible under the WOSB program shall not be considered.

(2) Any award resulting from this solicitation will be made to a WOSB concern eligible under the WOSB Program.

(3) The Contracting Officer will ensure that the apparent successful offeror has provided the required documents to the WOSB Program Repository. The contract shall not be awarded until all required documents are received.

(d) *Agreement.* A WOSB concern eligible under the WOSB Program agrees that in the performance of the contract for— * * *

* * * * *

(e) *Joint Venture.* A joint venture may be considered a WOSB concern eligible under the WOSB Program if—

* * * * *

(5) The procuring activity executes the contract in the name of the WOSB concern

eligible under the WOSB Program or joint venture.

* * * * *

[FR Doc. C2–2012–4475 Filed 3–23–12; 8:45 am]

BILLING CODE 1505–01–D

DEPARTMENT OF DEFENSE

GENERAL SERVICES ADMINISTRATION

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

48 CFR Part 52

[FAC 2005–56; FAR Case 2011–030; Item VI; Docket 2011–0030, Sequence 1]

RIN 9000–AM16

Federal Acquisition Regulation; New Designated Country (Armenia) and Other Trade Agreements Updates

Correction

In rule document 2012–4495 appearing on pages 12935 through 12937 in the issue of Friday, March 2 2012, make the following correction. On page 12936, Part 52—Solicitation Provisions and Contract Clauses, is reprinted in its entirety due to numerous errors. It should appear as follows:

PART 52—SOLICITATION PROVISIONS AND CONTRACT CLAUSES

■ 5. Amend section 52.212–5 by revising the date of the clause, and paragraphs (b)(27) and (b)(41) to read as follows:

52.212–5 Contract Terms and Conditions Required To Implement Statutes or Executive Orders—Commercial Items.

* * * * *

Contract Terms and Conditions Required To Implement Statutes or Executive Orders—Commercial Items (MAR 2012)

* * * * *

(b) * * *

__ (27) 52.222–19, Child Labor—Cooperation with Authorities and Remedies (MAR 2012) (E.O. 13126).

* * * * *

__ (41) 52.225–5, Trade Agreements (MAR 2012) (19 U.S.C. 2501, *et seq.,* 19 U.S.C. 3301 note).

* * * * *

■ 6. Amend section 52.213–4 by revising the date of the clause and paragraph (b)(1)(i) to read as follows:

52.213–4 Terms and Conditions—Simplified Acquisitions (Other Than Commercial Items).

* * * * *

Terms and Conditions—Simplified Acquisitions (Other Than Commercial Items) (MAR 2012)

* * * * *

(b) * * *

(1) * * *

(i) 52.222–19, Child Labor—Cooperation with Authorities and Remedies (MAR 2012) (E.O. 13126). (Applies to contracts for supplies exceeding the micro-purchase threshold.)

* * * * *

■ 7. Amend section 52.222–19 by revising the date of the clause to read as set forth below; and removing from paragraph (a)(4) the word ''Aruba,'' and adding the words ''Armenia, Aruba,'' in its place.

52.222–19 Child Labor—Cooperation with Authorities and Remedies.

* * * * *

CHILD LABOR—COOPERATION WITH AUTHORITIES AND REMEDIES (MAR 2012)

* * * * *

■ 8. Amend section 52.225–5 by revising the date of the clause to read as set forth below; and in paragraph (a) removing from paragraph (1) of the definition ''Designated country'' the word ''Aruba,'' and adding the words ''Armenia, Aruba,'' in its place.

52.225–5 Trade Agreements.

* * * * *

TRADE AGREEMENTS (MAR 2012)

* * * * *

■ 9. Amend section 52.225–7 by revising the date of the provision, and the second sentence of paragraph (b) to read as follows:

52.225–7 Waiver of Buy American Act for Civil Aircraft and Related Articles.

* * * * *

Waiver of Buy American Act for Civil Aircraft and Related Articles (MAR 2012)

* * * * *

(b) * * * Those countries are Albania, Austria, Belgium, Bulgaria, Canada, Cyprus, Czech Republic, Denmark, Egypt, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Macao China, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Taiwan (Chinese Taipei), and the United Kingdom.

* * * * *

■ 10. Amend section 52.225–11 by revising the date of the clause to read as set forth below; and in paragraph (a) removing from paragraph (1) of the definition ''Designated country'' the word ''Aruba,'' and adding the words ''Armenia, Aruba,'' in its place.

52.225–11 Buy American Act—Construction Materials Under Trade Agreements.

* * * * *

BUY AMERICAN ACT—CONSTRUCTION MATERIALS UNDER TRADE AGREEMENTS (MAR 2012) * * *

■ 11. Amend section 52.225–23 by revising the date of the clause to read as set forth below; and in paragraph (a) removing from paragraph (1) of the definition ''Designated country'' and paragraph (1) of the definition ''Recovery Act designated country'' the word ''(Aruba,'' and adding the words ''(Armenia, Aruba,'' in its place.

52.225–23 Required Use of American Iron, Steel, and Manufactured Goods—Buy American Act—Construction Materials Under Trade Agreements.

* * * * *

REQUIRED USE OF AMERICAN IRON, STEEL, AND MANUFACTURED GOODS—BUY AMERICAN ACT—CONSTRUCTION MATERIALS UNDER TRADE AGREEMENTS (MAR 2012)

* * * * *

[FR Doc. C2–2012–4495 Filed 3–23–12; 8:45 am]

BILLING CODE 1505–01–D

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 92

[Docket No. FWS–R7–MB–2011–0090; FF09M21200–123–FXMB1231099BPP0L2]

RIN 1018–AX55

Migratory Bird Subsistence Harvest in Alaska; Harvest Regulations for Migratory Birds in Alaska During the 2012 Season

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The U.S. Fish and Wildlife Service (Service or we) establishes migratory bird subsistence harvest regulations in Alaska for the 2012 season. These regulations will enable the continuation of customary and traditional subsistence uses of migratory birds in Alaska and prescribe regional information on when and where the harvesting of birds may occur. These regulations were developed under a co-management process involving the Service, the Alaska Department of Fish and Game, and Alaska Native representatives. The rulemaking is necessary because the regulations governing the subsistence harvest of migratory birds in Alaska are subject to

annual review. This rulemaking establishes region-specific regulations that go into effect on April 2, 2012, and expire on August 31, 2012.

DATES: The amendments to subpart D of 50 CFR part 92 are effective April 2, 2012, through August 31, 2012.

FOR FURTHER INFORMATION CONTACT: Fred Armstrong, (907) 786–3887, or Donna Dewhurst, (907) 786–3499, U.S. Fish and Wildlife Service, 1011 E. Tudor Road, Mail Stop 201, Anchorage, AK 99503.

SUPPLEMENTARY INFORMATION: These regulations will take effect less than 30 days after publication. If there were a delay in the effective date of these regulations after this final rulemaking, subsistence hunters would not be able to take full advantage of their subsistence hunting opportunities. We therefore find that ''good cause'' exists justifying the earlier start date, within the terms of 5 U.S.C. 553(d)(3) of the Administrative Procedure Act, and, under authority of the Migratory Bird Treaty Act (July 3, 1918), as amended (16 U.S.C. 703–711).

Why is this rulemaking necessary?

This rulemaking is necessary because, by law, the migratory bird harvest season is closed unless opened by the Secretary of the Interior, and the regulations governing subsistence harvest of migratory birds in Alaska are subject to public review and annual approval. This rule establishes regulations for the taking of migratory birds for subsistence uses in Alaska during the spring and summer of 2012. This rule establishes a list of migratory bird season openings and closures in Alaska by region.

How do I find the history of these regulations?

Background information, including past events leading to this rulemaking, accomplishments since the Migratory Bird Treaties with Canada and Mexico were amended, and a history, was originally addressed in the **Federal Register** on August 16, 2002 (67 FR 53511) and most recently on March 29, 2011 (76 FR 17353). Recent **Federal Register** documents, which are all final rules setting forth the annual harvest regulations, are available at *http://alaska.fws.gov/ambcc/regulations.htm* or by contacting one of the people listed under **FOR FURTHER INFORMATION CONTACT.**

What is the process for issuing regulations for the Subsistence Harvest of Migratory Birds in Alaska?

The U.S. Fish and Wildlife Service (Service or we) are establishing migratory bird subsistence harvest regulations in Alaska for the 2012 season. These regulations enable the continuation of customary and traditional subsistence uses of migratory birds in Alaska and prescribe regional information on when and where the harvesting of birds may occur. These final regulations were developed under a co-management process involving the Service, the Alaska Department of Fish and Game, and Alaska Native representatives.

We opened the process to establish regulations for the 2012 spring and summer subsistence harvest of migratory birds in Alaska in a proposed rule published in the **Federal Register** on April 8, 2011 (76 FR 19876). While that proposed rule dealt primarily with the regulatory process for hunting migratory birds for all purposes throughout the United States, we also discussed the background and history of Alaska subsistence regulations, explained the annual process for their establishment, and requested proposals for the 2012 season. The rulemaking processes for both types of migratory bird harvest are related, and the April 8, 2011, proposed rule explained the connection between the two.

The Alaska Migratory Bird Co-management Council (Co-management Council) held a meeting in June 2011, to develop recommendations for changes that would take effect during the 2012 harvest season. These recommendations were presented first to the Flyway Councils and then to the Service Regulations Committee at the committee's meeting on July 27 and 28, 2011.

On November 3, 2011, we published in the **Federal Register** (76 FR 68264) a proposed rule that provided our proposed migratory bird subsistence harvest regulations in Alaska for the 2012 season. Regulations presented in that proposed rule were identical to those for the 2011 harvest season.

Who is eligible to hunt under these regulations?

Eligibility to harvest under the regulations established in 2003 was limited to permanent residents, regardless of race, in villages located within the Alaska Peninsula, Kodiak Archipelago, the Aleutian Islands, and in areas north and west of the Alaska Range (50 CFR 92.5). These geographical restrictions opened the initial migratory bird subsistence harvest to about 13 percent of Alaska residents. High populated areas such as Anchorage, the Matanuska-Susitna and Fairbanks North Star boroughs, the Kenai Peninsula roaded area, the Gulf of Alaska roaded area, and Southeast Alaska were excluded from eligible subsistence harvest areas.

Based on petitions requesting inclusion in the harvest, in 2004, we added 13 additional communities based on criteria set forth in 50 CFR 92.5(c). These communities were Gulkana, Gakona, Tazlina, Copper Center, Mentasta Lake, Chitina, Chistochina, Tatitlek, Chenega, Port Graham, Nanwalek, Tyonek, and Hoonah, with a combined population of 2,766. In 2005, we added three additional communities for glaucous-winged gull egg gathering only, based on petitions requesting inclusion. These southeastern communities were Craig, Hydaburg, and Yakutat, with a combined population of 2,459, based on the latest census information at that time.

In 2007, we enacted the Alaska Department of Fish and Game's request to expand the Fairbanks North Star Borough excluded area to include the Central Interior area. This action excluded the following communities from participation in this harvest: Big Delta/Fort Greely, Healy, McKinley Park/Village, and Ferry, with a combined population of 2,812.

What is different in the region-specific regulations for 2012?

Regulations finalized in this rule are identical to those for the 2011 harvest season. However, at the June 2, 2011, Co-Management Council meeting, the Yukon/Kuskokwim Delta and Kodiak Archipelago regional representatives requested to remove their respective regions from 2012 regulations by not approving the consent agenda. Annually, the migratory bird subsistence season in Alaska is closed until regulations are passed that open the upcoming season. If regulations do not change from year to year, the 11 Alaska regions opt to vote a consent agenda whereby regulations from the previous year (2011) are accepted for the following year (2012).

The justification provided at the Co-Management Council Meeting by the Yukon/Kuskokwim Delta representative was that the region could not support regulations that included the duck stamp requirement. The representative indicated that there was a conflict in the application of other federal requirements to the Alaska Migratory Bird Co-Management Council (AMBCC) regulations and that the Federal

Government does not take into consideration other Native laws that could apply to the regulatory program. The representative also indicated that there is widespread opposition to the Federal duck stamp requirement and that he does not support any regulation requiring the Federal duck stamp to hunt waterfowl.

The justification provided by the Kodiak Archipelago representative was that the Kodiak Island representative expressed concerns that he was not familiar with the AMBCC process and was not familiar with the history of the regional regulations. The Kodiak Archipelago representative indicated that, based on discussions with local elders, they are not supportive of the closure areas or dates and could not support them. He indicated that there is egg gathering in the Kodiak Island region and that was another reason why he could not support a closure that would stop that activity.

After the Co-Management Council meeting, the Alaska Regional Director and his staff contacted both regional representatives to inform them that the Service Regulations Committee would have to implement regulations to provide harvest opportunities for subsistence users who take migratory birds in those areas and elsewhere. The Service Regulations Committee met on July 28, 2011, and does not support the lack of subsistence regulations in the Yukon/Kuskokwim and Kodiak Archipelago Regions. Therefore, the Service is continuing the 2011 regulations for those two regions through the 2012 season without change. Justification to finalize these regulations is to provide a continuity of the regulations affecting subsistence harvesters in those areas.

How will the service ensure that the subsistence harvest will not raise overall migratory bird harvest or threaten the conservation of endangered and threatened species?

We have monitored subsistence harvest for the past 25 years through the use of annual household surveys in the most heavily used subsistence harvest areas, such as the Yukon–Kuskokwim Delta. In recent years, more intensive surveys combined with outreach efforts focused on species identification have been added to improve the accuracy of information gathered from regions still reporting some subsistence harvest of listed or candidate species.

Spectacled and Steller's Eiders

Spectacled eiders *(Somateria fischeri)* and the Alaska-breeding population of Steller's eiders *(Polysticta stelleri)* are listed as threatened species; their migration and breeding distribution overlap with areas where the spring and summer subsistence migratory bird hunt is open in Alaska. Both species are closed to hunting, although harvest surveys and Service documentation indicate both species have been taken in several regions of Alaska.

The Service has dual goals and responsibilities for authorizing a subsistence harvest while protecting migratory birds and threatened species. Although these goals continue to be challenging, they are not irreconcilable, providing sufficient recognition is given to the need to protect threatened species, measures to remedy documented threats are implemented, and the subsistence community and other conservation partners commit to working together. With these dual goals in mind, the Service, working with North Slope partners, developed measures in 2009 to further reduce the potential for shooting mortality or injury of closed species. These conservation measures included: (1) Increased waterfowl hunter outreach and community awareness through partnering with the North Slope Migratory Bird Task Force; (2) continued enforcement of the migratory bird regulations that are protective of listed eiders; and (3) in-season Service verification of the harvest to detect Steller's eider mortality.

This final rule continues to focus on the North Slope from Barrow through Point Hope because Steller's eiders from the listed Alaska breeding population are known to breed and migrate there. These regulations were designed to address several ongoing eider management needs by clarifying for subsistence users that (1) Service law enforcement personnel have authority to verify species of birds possessed by hunters, and (2) it is illegal to possess any bird closed to harvest. This rule also describes how the Service's existing authority of emergency closure will be implemented, if necessary, to protect Steller's eiders. We are always willing to discuss regulations with our partners on the North Slope to ensure these protect closed species as well as provide subsistence hunters an opportunity to harvest migratory birds in a way that maintains the culture and traditional harvest of the community. The regulations pertaining to bag checks and possession of illegal birds are deemed necessary to verify compliance with not harvesting protected eider species.

The Service is aware of and appreciates the considerable efforts by North Slope partners to raise awareness and educate hunters on Steller's eider conservation via the bird fair, meetings, radio shows, signs, school visits, and one-on-one contacts. We also recognize that no listed eiders have been documented shot in the last 3 years, even with the first significant breeding season in recent years for Steller's eiders occurring in the Barrow area this past summer. The Service acknowledges progress made with the other eider conservation measures including partnering with the North Slope Migratory Bird Task Force for increased waterfowl hunter awareness, continued enforcement of the regulations, and in-season verification of the harvest. Our primary strategy to reduce the threat of shooting mortality of threatened eiders is to continue working with North Slope partners to conduct education, outreach, and harvest monitoring. In addition, the emergency closure authority provides another level of assurance if an unexpected amount of Steller's eider shooting mortality occurs (50 CFR 92.21 and 50 CFR 92.32).

In-season harvest monitoring information will be used to evaluate the efficacy of regulations, conservation measures, and outreach efforts. During 2009 through 2011, no Steller's eiders were reported being taken on the North Slope, and no Steller's eiders were found shot during in-season verification of the subsistence harvest. Based on these successes, the 2011 conservation measures will also be continued, although there will be some modification of the amount of effort and emphasis each will receive. Specifically, local communities have continued to develop greater responsibility for taking actions to ensure Steller's and spectacled eider conservation and recovery, and based on last year's observations, local hunters have demonstrated greater compliance with hunting regulations.

The longstanding general emergency closure provision at 50 CFR 92.21 specifies that the harvest may be closed or temporarily suspended upon finding that a continuation of the regulation allowing the harvest would pose an imminent threat to the conservation of any migratory bird population. With regard to Steller's eiders, the regulation at 50 CFR 92.32, carried over from the past 2 years, would clarify that we will take action under 50 CFR 92.21 as is necessary to prevent further take of Steller's eiders, and that action could include temporary or long-term closures of the harvest in all or a portion of the geographic area open to harvest. If mortality of threatened eiders occurs, we will evaluate each mortality event by criteria such as cause, quantity, sex, age, location, and date. We will consult with

the Co-management Council when we are considering an emergency closure. If we determine that an emergency closure is necessary, we will design it to minimize its impact on the subsistence harvest.

Yellow-Billed Loon And Kittlitz's Murrelet

Yellow-billed loon (*Gavia adamsii*) and Kittlitz's murrelet (*Brachyramphus brevirostris)* are candidate species for listing under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*). Their migration and breeding distribution overlaps with where the spring and summer migratory bird hunt is open in Alaska. Both species are closed to hunting, and there is no evidence Kittlitz's murrelets are harvested. On the other hand, harvest surveys have indicated that harvest of yellow-billed loons on the North Slope and St. Lawrence Island does occur. Most of the yellow-billed loons reported harvested on the North Slope were found to be entangled loons salvaged from subsistence fishing nets as described below. The Service will continue outreach efforts in both areas in 2012, engaging partners to improve harvest estimates and decrease take of yellow-billed loons.

Consistent with the request of the North Slope Borough Fish and Game Management Committee and the recommendation of the Co-management Council, this rule continues through 2012 the provisions originally established in 2005, to allow subsistence use of yellow-billed loons inadvertently entangled in subsistence fishing (gill) nets on the North Slope. Yellow-billed loons are culturally important to the Inupiat Eskimo of the North Slope for use in traditional dance regalia. A maximum of 20 yellow-billed loons may be kept if found entangled in fishing nets in 2012, under this provision. This provision does not authorize intentional harvest of yellow-billed loons, but allows use of those loons inadvertently entangled during normal subsistence fishing activities.

In 2010, the Service Regulations Committee's continued support of this provision was contingent on the North Slope Borough collaborating with the Service and the Co-Management Council to design and implement, in 2011, a scientifically defensible survey to estimate the number of yellow-billed loons entangled in subsistence fishing nets. During June 2011, the North Slope submitted a proposal entitled, ''Assessment of Yellow-Billed Loons Inadvertently Entangled in Subsistence Fishing Nets in the North Slope Borough'' that has been endorsed by the Alaska Department of Fish and Game and the Service. The Service Regulations Committee met on July 28, 2011, and appreciated the efforts by the North Slope Borough to develop a scientifically defensible yellow-billed loon entanglement survey and therefore supported continuation of the provision to allow subsistence use of up to 20 yellow-billed loons inadvertently caught in subsistence fishing nets.

Endangered Species Act Consideration

Section 7 of the Endangered Species Act (16 U.S.C. 1536) requires the Secretary of the Interior to ''review other programs administered by him and utilize such programs in furtherance of the purposes of the Act'' and to ''insure that any action authorized, funded, or carried out * * * is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat * * *'' We conducted an intra-agency consultation with the Fairbanks Fish and Wildlife Field Office on this harvest as it will be managed in accordance with this final rule and the conservation measures. The consultation was completed with a March 14, 2012, biological opinion that concluded the final rule and conservation measures are not likely to jeopardize the continued existence of Steller's eider, spectacled eider, yellow-billed loon, or Kittlitz's murrelet, or result in the destruction or adverse modification of designated critical habitat for Steller's eider or spectacled eider.

Summary of Public Involvement

On November 3, 2011, we published in the **Federal Register** a proposed rule (76 FR 68264) to establish spring and summer migratory bird subsistence harvest regulations in Alaska for the 2012 subsistence season. The proposed rule provided for a public comment period of 60 days, ending January 3, 2012. We posted an announcement of the comment period dates for the proposed rule, as well as the rule itself and related historical documents, on the Co-management Council's Internet homepage. We issued a press release announcing our request for public comments and the pertinent deadlines for such comments, which was faxed to the media Statewide. Additionally, all documents were available on *http://www.regulations.gov*. The Service received two responses, one from an organization and the other from an individual.

Response to Public Comments

General Comments

Comment: We received one general comment on the overall regulations that expressed strong opposition to the concept of allowing any harvest of migratory birds in Alaska.

Service Response: For centuries, indigenous inhabitants of Alaska have harvested migratory birds for subsistence purposes during the spring and summer months. The Canada and Mexico migratory bird treaties were amended for the express purpose of allowing subsistence hunting for migratory birds during the spring and summer. The amendments indicate that the Service should issue regulations allowing such hunting as provided in the Migratory Bird Treaty Act; see 16 U.S.C. 712(1). See also Statutory Authority section, below, for more details.

Section 92.20 Methods and Means

Comment: We received one comment addressing an objection that the use of bowhunting for birds was not prohibited. Also the commenter was concerned that the use of dogs to retrieve harvested birds was not prohibited. The commenter opined that both forms of bird hunting are cruel and involve injuries to the birds, often resulting in slow and painful deaths.

Service Response: The amendments to Migratory Bird Treaty Act have two mandates: one is for the conservation of migratory birds, and the other is to continue the customary and traditional harvest of migratory birds during the spring and summer seasons. The use of bowhunting and the use of dogs for retrieving are both considered not to be customary and traditional practices in rural Alaska for harvesting migratory birds, and are rarely if ever practiced. Therefore, they are not considered to be issues of conservation concern.

Statutory Authority

We derive our authority to issue these regulations from the Migratory Bird Treaty Act of 1918, at 16 U.S.C. 712(1), which authorizes the Secretary of the Interior, in accordance with the treaties with Canada, Mexico, Japan, and Russia, to ''issue such regulations as may be necessary to assure that the taking of migratory birds and the collection of their eggs, by the indigenous inhabitants of the State of Alaska, shall be permitted for their own nutritional and other essential needs, as determined by the Secretary of the Interior, during seasons established so as to provide for the preservation and maintenance of stocks of migratory birds.''

Required Determinations

Regulatory Planning and Review (Executive Order 12866)

The Office of Management and Budget (OMB) has determined that this rule is not significant and has not reviewed this rule under Executive Order 12866 (E.O. 12866). OMB bases its determination upon the following four criteria:

(a) Whether the rule will have an annual effect of $100 million or more on the economy or adversely affect an economic sector, productivity, jobs, the environment, or other units of the government.

(b) Whether the rule will create inconsistencies with other Federal agencies' actions.

(c) Whether the rule will materially affect entitlements, grants, user fees, loan programs, or the rights and obligations of their recipients.

(d) Whether the rule raises novel legal or policy issues.

Regulatory Flexibility Act

The Department of the Interior certifies that this rule will not have a significant economic impact on a substantial number of small entities as defined under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*). An initial regulatory flexibility analysis is not required. Accordingly, a Small Entity Compliance Guide is not required. This final rule legalizes a pre-existing subsistence activity, and the resources harvested will be consumed by the harvesters or persons within their local community.

Small Business Regulatory Enforcement Fairness Act

This rule is not a major rule under 5 U.S.C. 804(2), the Small Business Regulatory Enforcement Fairness Act. This rule:

(a) Will not have an annual effect on the economy of $100 million or more. It legalizes and regulates a traditional subsistence activity. It will not result in a substantial increase in subsistence harvest or a significant change in harvesting patterns. The commodities being regulated under this final rule are migratory birds. This rule deals with legalizing the subsistence harvest of migratory birds and, as such, does not involve commodities traded in the marketplace. A small economic benefit from this final rule derives from the sale of equipment and ammunition to carry out subsistence hunting. Most, if not all, businesses that sell hunting equipment in rural Alaska qualify as small businesses. We have no reason to believe that this final rule will lead to a disproportionate distribution of benefits.

(b) Will not cause a major increase in costs or prices for consumers; individual industries; Federal, State, or local government agencies; or geographic regions. This final rule does not deal with traded commodities and, therefore, does not have an impact on prices for consumers.

(c) Does not have significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises. This final rule deals with the harvesting of wildlife for personal consumption. It does not regulate the marketplace in any way to generate effects on the economy or the ability of businesses to compete.

Unfunded Mandates Reform Act

We have determined and certified under the Unfunded Mandates Reform Act (2 U.S.C. 1501 *et seq.*) that this final rule will not impose a cost of $100 million or more in any given year on local, State, or tribal governments or private entities. The final rule does not have a significant or unique effect on State, local, or tribal governments or the private sector. A statement containing the information required by the Unfunded Mandates Reform Act is not required. Participation on regional management bodies and the Co-management Council will require travel expenses for some Alaska Native organizations and local governments. In addition, they will assume some expenses related to coordinating involvement of village councils in the regulatory process. Total coordination and travel expenses for all Alaska Native organizations are estimated to be less than $300,000 per year. In a Notice of Decision (65 FR 16405; March 28, 2000), we identified 7 to 12 partner organizations (Alaska Native nonprofits and local governments) to administer the regional programs. The Alaska Department of Fish and Game will also incur expenses for travel to Co-management Council and regional management body meetings. In addition, the State of Alaska will be required to provide technical staff support to each of the regional management bodies and to the Co-management Council. Expenses for the State's involvement may exceed $100,000 per year, but should not exceed $150,000 per year. When funding permits, we make annual grant agreements available to the partner organizations and the Alaska Department of Fish and Game to help offset their expenses.

Takings (Executive Order 12630)

Under the criteria in Executive Order 12630, this final rule does not have significant takings implications. This final rule is not specific to particular land ownership, but applies to the harvesting of migratory bird resources throughout Alaska. A takings implication assessment is not required.

Federalism (Executive Order 13132)

Under the criteria in Executive Order 13132, this final rule does not have sufficient federalism implications to warrant the preparation of a federalism summary impact statement. We discuss effects of this final rule on the State of Alaska in the Unfunded Mandates Reform Act section above. We worked with the State of Alaska to develop these regulations. Therefore, a federalism summary impact statement is not required.

Civil Justice Reform (Executive Order 12988)

The Department, in promulgating this final rule, has determined that it will not unduly burden the judicial system and that it meets the requirements of sections 3(a) and 3(b)(2) of Executive Order 12988.

Government-to-Government Relations with Native American Tribal Governments

In keeping with the spirit of the President's memorandum of April 29, 1994, ''Government-to-Government Relations With Native American Tribal Governments'' (59 FR 22951), and Executive Order 13175 (65 FR 67249; November 6, 2000), concerning consultation and coordination with Indian Tribal Governments, we submitted over 413 letters to all tribes, tribal entities, and Native Corporations in Alaska soliciting their input as to whether or not they would like the Service to consult with them on the 2012 migratory bird subsistence harvest regulations. We received 5 responses, of which 3 requested consultation, and one indicated they were happy with the process and did not want consultation. We did follow up with a call to the latter tribe, and they were undecided as to what they wanted to do. We conducted 3 consultations with the tribes on December 4, 2012. All 3 tribes were happy with the information provided and did not have any comments on the regulations.

We implemented the amended treaty with Canada with a focus on local involvement. The treaty calls for the creation of management bodies to ensure an effective and meaningful role for Alaska's indigenous inhabitants in

the conservation of migratory birds. According to the Letter of Submittal, management bodies are to include Alaska Native, Federal, and State of Alaska representatives as equals. They will develop recommendations for among other things: seasons and bag limits, methods and means of take, law enforcement policies, population and harvest monitoring, education programs, research and use of traditional knowledge, and habitat protection. The management bodies will involve village councils to the maximum extent possible in all aspects of management. To ensure maximum input at the village level, we required each of the 11 participating regions to create regional management bodies consisting of at least one representative from the participating villages. The regional management bodies meet twice annually to review and/or submit proposals to the Statewide body.

Paperwork Reduction Act

This final rule has been examined under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*) and does not contain any new collections of information that require Office of Management and Budget (OMB) approval. OMB has approved our collection of information associated with the voluntary annual household surveys used to determine levels of subsistence take. The OMB control number is 1018–0124, which expires April 30, 2013. An agency may not conduct or sponsor and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act (42 U.S.C. 4321 et seq.) Consideration

The annual regulations and options were considered in the environmental assessment, ''Managing Migratory Bird Subsistence Hunting in Alaska: Hunting Regulations for the 2012 Spring/Summer Harvest,'' October 25, 2011. Copies are available from either the person listed under **FOR FURTHER INFORMATION CONTACT** or at *http://www.regulations.gov.*

Energy Supply, Distribution, or Use (Executive Order 13211)

Executive Order 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. This is not a significant regulatory action under this Executive Order; it will allow only for traditional subsistence harvest and will improve conservation of migratory birds by allowing effective regulation of this harvest. Further, this final rule is not expected to significantly affect energy supplies, distribution, or use. Therefore, this action is not a significant energy action under Executive Order 13211, and no Statement of Energy Effects is required.

List of Subjects in 50 CFR Part 92

Hunting, Treaties, Wildlife.

Final Regulation Promulgation

For the reasons set out in the preamble, we amend title 50, chapter I, subchapter G, of the Code of Federal Regulations as follows:

PART 92—MIGRATORY BIRD SUBSISTENCE HARVEST IN ALASKA

■ 1. The authority citation for part 92 continues to read as follows:

Authority: 16 U.S.C. 703–712.

Subpart D—Annual Regulations Governing Subsistence Harvest

■ 2. Add § 92.31 to subpart D to read as follows:

§ 92.31 Region-specific regulations.

The 2012 season dates for the eligible subsistence harvest areas are as follows:

(a) *Aleutian/Pribilof Islands Region.*

(1) Northern Unit (Pribilof Islands):

(i) Season: April 2–June 30.

(ii) Closure: July 1–August 31.

(2) Central Unit (Aleut Region's eastern boundary on the Alaska Peninsula westward to and including Unalaska Island):

(i) Season: April 2–June 15 and July 16–August 31.

(ii) Closure: June 16–July 15.

(iii) Special Black Brant Season Closure: August 16–August 31, only in Izembek and Moffet lagoons.

(iv) Special Tundra Swan Closure: All hunting and egg gathering closed in units 9(D) and 10.

(3) Western Unit (Umnak Island west to and including Attu Island):

(i) Season: April 2–July 15 and August 16–August 31.

(ii) Closure: July 16–August 15.

(b) *Yukon/Kuskokwim Delta Region.*

(1) Season: April 2–August 31.

(2) Closure: 30-day closure dates to be announced by the Service's Alaska Regional Director or his designee, after consultation with field biologists and the Association of Village Council President's Waterfowl Conservation Committee. This 30-day period will occur between June 1 and August 15 of each year. A press release announcing the actual closure dates will be forwarded to regional newspapers and radio and television stations.

(3) Special Black Brant and Cackling Goose Season Hunting Closure: From the period when egg laying begins until young birds are fledged. Closure dates to be announced by the Service's Alaska Regional Director or his designee, after consultation with field biologists and the Association of Village Council President's Waterfowl Conservation Committee. A press release announcing the actual closure dates will be forwarded to regional newspapers and radio and television stations.

(c) *Bristol Bay Region.*

(1) Season: April 2–June 14 and July 16–August 31 (general season); April 2–July 15 for seabird egg gathering only.

(2) Closure: June 15–July 15 (general season); July 16–August 31 (seabird egg gathering).

(d) *Bering Strait/Norton Sound Region.*

(1) Stebbins/St. Michael Area (Point Romanof to Canal Point):

(i) Season: April 15–June 14 and July 16–August 31.

(ii) Closure: June 15–July 15.

(2) Remainder of the region:

(i) Season: April 2–June 14 and July 16–August 31 for waterfowl; April 2–July 19 and August 21–August 31 for all other birds.

(ii) Closure: June 15–July 15 for waterfowl; July 20–August 20 for all other birds.

(e) *Kodiak Archipelago Region,* except for the Kodiak Island roaded area, which is closed to the harvesting of migratory birds and their eggs. The closed area consists of all lands and waters (including exposed tidelands) east of a line extending from Crag Point in the north to the west end of Saltery Cove in the south and all lands and water south of a line extending from Termination Point along the north side of Cascade Lake extending to Anton Larson Bay. Waters adjacent to the closed area are closed to harvest within 500 feet from the water's edge. The offshore islands are open to harvest.

(1) Season: April 2–June 30 and July 31–August 31 for seabirds; April 2–June 20 and July 22–August 31 for all other birds.

(2) Closure: July 1–July 30 for seabirds; June 21–July 21 for all other birds.

(f) *Northwest Arctic Region.*

(1) Season: April 2–June 9 and August 15–August 31 (hunting in general); waterfowl egg gathering May 20–June 9 only; seabird egg gathering May 20–July 12 only; hunting molting/non-nesting waterfowl July 1–July 31 only.

(2) Closure: June 10–August 14, except for the taking of seabird eggs and molting/non-nesting waterfowl as provided in paragraph (f)(1) of this section.

(g) *North Slope Region.*

(1) Southern Unit (Southwestern North Slope regional boundary east to Peard Bay, everything west of the longitude line 158°30′ W and south of the latitude line 70°45′ N to the west bank of the Ikpikpuk River, and everything south of the latitude line 69°45′ N between the west bank of the Ikpikpuk River to the east bank of Sagavinirktok River):

(i) Season: April 2–June 29 and July 30–August 31 for seabirds; April 2–June 19 and July 20–August 31 for all other birds.

(ii) Closure: June 30–July 29 for seabirds; June 20–July 19 for all other birds.

(iii) Special Black Brant Hunting Opening: From June 20–July 5. The open area would consist of the coastline, from mean high water line outward to include open water, from Nokotlek Point east to longitude line 158°30′ W. This includes Peard Bay, Kugrua Bay, and Wainwright Inlet, but not the Kuk and Kugrua river drainages.

(2) Northern Unit (At Peard Bay, everything east of the longitude line 158°30′ W and north of the latitude line 70°45′ N to west bank of the Ikpikpuk River, and everything north of the latitude line 69°45′ N between the west bank of the Ikpikpuk River to the east bank of Sagavinirktok River):

(i) Season: April 6–June 6 and July 7–August 31 for king and common eiders; April 2–June 15 and July 16–August 31 for all other birds.

(ii) Closure: June 7–July 6 for king and common eiders; June 16–July 15 for all other birds.

(3) Eastern Unit (East of eastern bank of the Sagavanirktok River):

(i) Season: April 2–June 19 and July 20–August 31.

(ii) Closure: June 20–July 19.

(4) All Units: yellow-billed loons. Annually, up to 20 yellow-billed loons total for the region may be inadvertently entangled in subsistence fishing nets in the North Slope Region and kept for subsistence use.

(5) North Coastal Zone (Cape Thompson north to Point Hope and east along the Arctic Ocean coastline around Point Barrow to Ross Point, including Iko Bay, and 5 miles inland).

(i) No person may at any time, by any means, or in any manner, possess or have in custody any migratory bird or part thereof, taken in violation of subparts C and D of this part.

(ii) Upon request from a Service law enforcement officer, hunters taking, attempting to take, or transporting migratory birds taken during the subsistence harvest season must present them to the officer for species identification.

(h) *Interior Region.*

(1) Season: April 2–June 14 and July 16–August 31; egg gathering May 1–June 14 only.

(2) Closure: June 15–July 15.

(i) *Upper Copper River Region* (Harvest Area: Units 11 and 13) (Eligible communities: Gulkana, Chitina, Tazlina, Copper Center, Gakona, Mentasta Lake, Chistochina and Cantwell).

(1) Season: April 15–May 26 and June 27–August 31.

(2) Closure: May 27–June 26.

(3) The Copper River Basin communities listed above also documented traditional use harvesting birds in Unit 12, making them eligible to hunt in this unit using the seasons specified in paragraph (h) of this section.

(j) *Gulf of Alaska Region.*

(1) Prince William Sound Area (Harvest area: Unit 6[D]), (Eligible Chugach communities: Chenega Bay, Tatitlek):

(i) Season: April 2–May 31 and July 1–August 31.

(ii) Closure: June 1–30.

(2) Kachemak Bay Area (Harvest area: Unit 15[C] South of a line connecting the tip of Homer Spit to the mouth of Fox River) (Eligible Chugach Communities: Port Graham, Nanwalek):

(i) Season: April 2–May 31 and July 1–August 31.

(ii) Closure: June 1–30.

(k) *Cook Inlet* (Harvest area: portions of Unit 16[B] as specified below) (Eligible communities: Tyonek only):

(1) Season: April 2–May 31—That portion of Unit 16(B) south of the Skwentna River and west of the Yentna River, and August 1–31—That portion of Unit 16(B) south of the Beluga River, Beluga Lake, and the Triumvirate Glacier:

(2) Closure: June 1–July 31.

(l) *Southeast Alaska.*

(1) Community of Hoonah (Harvest area: National Forest lands in Icy Strait and Cross Sound, including Middle Pass Rock near the Inian Islands, Table Rock in Cross Sound, and other traditional locations on the coast of Yakobi Island. The land and waters of Glacier Bay National Park remain closed to all subsistence harvesting (50 CFR Part 100.3(a)):

(i) Season: glaucous-winged gull egg gathering only: May 15–June 30.

(ii) Closure: July 1–August 31.

(2) Communities of Craig and Hydaburg (Harvest area: small islands and adjacent shoreline of western Prince of Wales Island from Point Baker to Cape Chacon, but also including Coronation and Warren islands):

(i) Season: glaucous-winged gull egg gathering only: May 15–June 30.

(ii) Closure: July 1–August 31.

(3) Community of Yakutat (Harvest area: Icy Bay (Icy Cape to Point Riou), and coastal lands and islands bordering the Gulf of Alaska from Point Manby southeast to Dry Bay):

(i) Season: glaucous-winged gull egg gathering: May 15–June 30.

(ii) Closure: July 1–August 31.

■ 3. Add § 92.32 to subpart D to read as follows:

§ 92.32 Emergency regulations to protect Steller's eiders.

Upon finding that continuation of the subsistence regulations in this subpart would pose an imminent threat to the conservation of threatened Steller's eiders *(Polysticta stelleri),* the U.S. Fish and Wildlife Service Alaska Regional Director, in consultation with the Co-management Council, will immediately under § 92.21 take action as is necessary to prevent further take. Regulation changes implemented could range from a temporary closure of duck hunting in a small geographic area to large-scale regional or Statewide long-term closures of all subsistence migratory bird hunting. These closures or temporary suspensions will remain in effect until the Regional Director, in consultation with the Co-management Council, determines that the potential for additional Steller's eiders to be taken no longer exists.

Dated: March 12, 2012.

Rachel Jacobson,

Acting Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 2012–7199 Filed 3–23–12; 8:45 am]

BILLING CODE 4310–55–P

Proposed Rules

Federal Register
Vol. 77, No. 58
Monday, March 26, 2012

This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

OFFICE OF MANAGEMENT AND BUDGET

2 CFR Chapters I and II

Reform of Federal Policies Relating to Grants and Cooperative Agreements; Cost Principles And Administrative Requirements (Including Single Audit Act)

AGENCY: Executive Office of the President, Office of Management and Budget (OMB).

ACTION: Advance notice of proposed guidance; extension of comment period.

SUMMARY: The Office of Management and Budget (OMB) is extending the comment period for the Advance Notice of Proposed Guidance on Reform of Federal Policies Relating to Grants and Cooperative Agreements; cost principles and administrative requirements (including Single Audit Act). The original comment period was scheduled to end on March 29, 2012. With this document, OMB is extending the time period in which to provide public comments until April 30, 2012. This will allow interested parties additional time to analyze the issues and prepare their comments.

DATES: To be assured of consideration, comments must be received by OMB at one of the addresses provided below, no later than 5 p.m. Eastern Standard Time (E.S.T) on April 30, 2012.

ADDRESSES: In submitting commenting, please refer to file ''Grant Reform''. You may submit comments using one of the following three alternatives (please choose only one of these three alternatives):

1. Electronically. You may submit electronic comments on this regulation to *http://www.regulations.gov.* Follow the instructions for submitting comments.

2. By express or overnight mail. You may send written comments to the following address only: Office of Management and Budget, 725 17th St NW., Washington DC, 20025, Attention: Office of Federal Financial Management ''Grant Reform''.

3. By regular mail. You may mail written comments to the following address only: Office of Management and Budget, 725 17th St NW., Washington DC, 20025, Attention: Office of Federal Financial Management ''Grant Reform''. Due to potential delays in OMB's receipt and processing of mail sent through the U.S. Postal Service, we strongly encourage respondents to submit comments electronically to ensure timely receipt. We cannot guarantee that comments sent via surface mail will be received before the comment closing date.

Comments will be most useful if they are presented in the same sequence (and with the same heading) as the section of this notice to which they apply. Also, if you are submitting comments on behalf of an organization, please identify the organization. Finally, the public comments received by OMB will be posted on OMB's Web site and at *http://www.regulations.gov* (follow the search instructions on that Web site to view public comments). Accordingly, please do not include in your comments any confidential business information or information of a personal-privacy nature.

FOR FURTHER INFORMATION CONTACT: Victoria Collin at (202) 395–7791 for general information.

SUPPLEMENTARY INFORMATION: OMB is extending the comment period for its advance notice of proposed guidance, which published in the **Federal Register** on February 28, 2012, at 77 FR 11178. The original comment period was scheduled to end on March 29, 2012, and this document extends it to April 30, 2012.

Copies of the OMB Circulars that are discussed in this notice are available on OMB's Web site at *http://www.whitehouse.gov/omb/circulars_default/.* Circulars A–110, A–21, A–87, and A–122 are also available at 2 CFR at *http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/Title02/2cfrv1_02.tpl.* The Cost Principles for Hospitals are in the regulations of the Department of Health and Human Services at 45 CFR part 75, appendix E (*Principles for Determining Costs Applicable to Research and Development Under Grants and Contracts with Hospitals*), at *http://www.gpo.gov/fdsys/pkg/CFR–2011-title45-vol1/pdf/CFR–2011-title45-vol1.pdf.*

Daniel I. Werfel,

Controller.

[FR Doc. 2012–7056 Filed 3–22–12; 11:15 am]

BILLING CODE P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2011–1211; Airspace Docket No. 11–ASO–40]

Proposed Amendment of Class E Airspace; Memphis, TN

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This action proposes to amend Class E Airspace at Memphis, TN, as the West Memphis Non-Directional Beacon (NDB) has been decommissioned and new Standard Instrument Approach Procedures have been developed at Memphis International Airport. This action also would remove West Memphis Municipal Airport, West Memphis, TN from the existing airspace surrounding Memphis International Airport, Memphis, TN. This action would enhance the safety and airspace management of Instrument Flight Rules (IFR) operations at the airport.

DATES: Effective 0901 UTC, Comments must be received on or before May 10, 2012. The Director of the Federal Register approves this incorporation by reference action under title 1, Code of Federal Regulations, part 51, subject to the annual revision of FAA, Order 7400.9 and publication of conforming amendments.

ADDRESSES: Send comments on this rule to: U.S. Department of Transportation, Docket Operations, West Building Ground Floor, Room W12–140, 1200 New Jersey Ave. SE., Washington, DC 20590–0001; Telephone: 1–800–647–5527; Fax: 202–493–2251. You must identify the Docket Number FAA–2011–1211; Airspace Docket No. 11–ASO–40, at the beginning of your comments. You may also submit and review received

comments through the Internet at *http://www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT: John Fornito, Operations Support Group, Eastern Service Center, Federal Aviation Administration, P.O. Box 20636, Atlanta, Georgia 30320; telephone (404) 305–6364.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to comment on this rule by submitting such written data, views, or arguments, as they may desire. Comments that provide the factual basis supporting the views and suggestions presented are particularly helpful in developing reasoned regulatory decisions on the proposal. Comments are specifically invited on the overall regulatory, aeronautical, economic, environmental, and energy-related aspects of the proposal.

Communications should identify both docket numbers (FAA Docket No. FAA–2011–1211; Airspace Docket No. 11–ASO–40) and be submitted in triplicate to the Docket Management System (see **ADDRESSES** section for address and phone number). You may also submit comments through the Internet at *http://www.regulations.gov.*

Persons wishing the FAA to acknowledge receipt of their comments on this action must submit with those comments a self-addressed stamped postcard on which the following statement is made: ''Comments to Docket No. FAA–2011–1211; Airspace Docket No. 11–ASO–40.'' The postcard will be date/time stamped and returned to the commenter.

All communications received before the specified closing date for comments will be considered before taking action on the proposed rule. The proposal contained in this notice may be changed in light of the comments received. A report summarizing each substantive public contact with FAA personnel concerned with this rulemaking will be filed in the docket.

Availability of NPRMs

An electronic copy of this document may be downloaded from and comments submitted through *http://www.regulations.gov.* Recently published rulemaking documents can also be accessed through the FAA's Web page at *http://www.faa.gov/airports_airtraffic/air_traffic/publications/airspace_amendments/.*

You may review the public docket containing the proposal, any comments received, and any final disposition in person in the Dockets Office (see the **ADDRESSES** section for address and phone number) between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. An informal docket may also be examined during normal business hours at the office of the Eastern Service Center, Federal Aviation Administration, room 350, 1701 Columbia Avenue, College Park, Georgia 30337.

Persons interested in being placed on a mailing list for future NPRM's should contact the FAA's Office of Rulemaking, (202) 267–9677, to request a copy of Advisory Circular No. 11–2A, Notice of Proposed Rulemaking distribution System, which describes the application procedure.

The Proposal

The FAA is considering an amendment to Title 14, Code of Federal Regulations (14 CFR) part 71 to amend Class E airspace extending upward from 700 feet above the surface to support new standard instrument approach procedures developed at Memphis International Airport, Memphis, TN. Airspace reconfiguration is necessary due to the decommissioning of the West Memphis NDB and cancellation of the NDB approach, and for continued safety and management of IFR operations at the airport. Also, West Memphis Municipal Airport, West Memphis, AR, would be removed from the Memphis, TN, airspace designation to accommodate the separation of existing Class E airspace surrounding Memphis International Airport, Memphis, TN. The establishment of the new designator for the controlled airspace at West Memphis Municipal Airport, West Memphis, AR, would simultaneously be coordinated with this action.

Class E airspace designations are published in Paragraph 6005 of FAA order 7400.9V, dated August 9, 2011, and effective September 15, 2011, which is incorporated by reference in 14 CFR 71.1. The Class E airspace designation listed in this document will be published subsequently in the Order.

The FAA has determined that this proposed regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. It, therefore, (1) is not a ''significant regulatory action'' under Executive Order 12866; (2) is not a ''significant rule'' under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a Regulatory Evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this proposed rule, when promulgated, would not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

The FAA's authority to issue rules regarding aviation safety is found in Title 49 of the United States Code. Subtitle I, Section 106 describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency's authority. This proposed rulemaking is promulgated under the authority described in Subtitle VII, Part, A, Subpart I, Section 40103. Under that section, the FAA is charged with prescribing regulations to assign the use of airspace necessary to ensure the safety of aircraft and the efficient use of airspace. This proposed regulation is within the scope of that authority as it would amend Class E airspace at Memphis International Airport, Memphis TN.

This proposal will be subject to an environmental analysis in accordance with FAA Order 1050.1E, ''Environmental Impacts: Policies and procedures'' prior to any FAA final regulatory action.

Lists of Subjects in 14 CFR Part 71

Airspace, Incorporation by reference, Navigation (Air).

The Proposed Amendment

In consideration of the foregoing, the Federal Aviation Administration proposes to amend 14 CFR Part 71 as follows:

PART 71 —DESIGNATION OF CLASS A, B, C, D, AND E AIRSPACE AREAS; AIR TRAFFIC SERVICE ROUTES; AND REPORTING POINTS

1. The authority citation for Part 71 continues to read as follows:

Authority: 49 U.S.C. 106(g); 40103, 40113, 40120; E.O. 10854, 24 FR 9565, 3 CFR, 1959–1963 Comp., p. 389.

§ 71.1 [Amended]

2. The incorporation by reference in 14 CFR 71.1 of Federal Aviation Administration Order 7400.9V, Airspace Designations and Reporting Points, dated August 9, 2011, effective September 15, 2011, is amended as follows:

Paragraph 6005 Class E airspace areas extending upward from 700 feet or more above the surface of the earth.

* * * * *

ASO TN E5 Memphis, TN

Memphis International Airport, TN
(Lat. 35°02′33″ N., long. 89°58′36″ W.)

Olive Branch, MS, Olive Branch Airport
(Lat. 34°58′44″ N., long. 89°47′13″ W.)
General DeWitt Spain Airport
(Lat. 35°12′02″ N., long. 90°03′14″ W.)
Elvis NDB
(Lat. 35°03′41″ N., long. 90°04′18″ W.)

That airspace extending upward from 700 feet above the surface within an 8-mile radius of Memphis International Airport, and within 4 miles north and 8 miles south of the 271° bearing from the Elvis NDB extending from the 8-mile radius to 16 miles west of the Elvis NDB, and within a 7.5-mile radius of Olive Branch Airport, Olive Branch, MS, and within 4 miles west and 8 miles east of the 017° bearing and 4 miles west and 8 miles east of the 170° bearing from the Olive Branch NDB extending from the 7.5-mile radius to 16 miles northeast and south of the airport, and within a 6.4-mile radius of General DeWitt Spain Airport; excluding that airspace within the Millington, TN, Class E airspace area.

Issued in College Park, Georgia, on March 14, 2012.

Barry A. Knight,

Manager, Operations Support Group, Eastern Service Center, Air Traffic Organization.

[FR Doc. 2012–7103 Filed 3–23–12; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2011–0363; Airspace Docket No. 11–ANM–8]

Proposed Modification of Class D and Class E Airspace and Revocation of Class E Airspace; Bellingham, WA

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This action proposes to modify Class D and Class E airspace at Bellingham, WA, to accommodate aircraft departing and arriving under Instrument Flight Rules (IFR) at Bellingham International Airport. This action also would remove Class E airspace designated as an extension to a Class D or E surface area at Bellingham International Airport. This action, initiated by the biennial review of the Bellingham airspace area, would enhance the safety and management of aircraft operations at the airport.

DATES: Comments must be received on or before May 10, 2012.

ADDRESSES: Send comments on this proposal to the U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590; telephone (202) 366–9826. You must identify FAA Docket No. FAA–2011–0363; Airspace Docket No. 11–ANM–8, at the beginning of your comments. You may also submit comments through the Internet at *http://www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT: Eldon Taylor, Federal Aviation Administration, Operations Support Group, Western Service Center, 1601 Lind Avenue SW., Renton, WA 98057; telephone (425) 203–4537.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested parties are invited to participate in this proposed rulemaking by submitting such written data, views, or arguments, as they may desire. Comments that provide the factual basis supporting the views and suggestions presented are particularly helpful in developing reasoned regulatory decisions on the proposal. Comments are specifically invited on the overall regulatory, aeronautical, economic, environmental, and energy-related aspects of the proposal.

Communications should identify both docket numbers (FAA Docket No. FAA 2011–0363 and Airspace Docket No. 11–ANM–8) and be submitted in triplicate to the Docket Management System (see **ADDRESSES** section for address and phone number). You may also submit comments through the Internet at *http://www.regulations.gov.*

Commenters wishing the FAA to acknowledge receipt of their comments on this action must submit with those comments a self-addressed stamped postcard on which the following statement is made: ''Comments to FAA Docket No. FAA–2011–0363 and Airspace Docket No. 11–ANM–8''. The postcard will be date/time stamped and returned to the commenter.

All communications received on or before the specified closing date for comments will be considered before taking action on the proposed rule. The proposal contained in this action may be changed in light of comments received. All comments submitted will be available for examination in the public docket both before and after the closing date for comments. A report summarizing each substantive public contact with FAA personnel concerned with this rulemaking will be filed in the docket.

Availability of NPRM's

An electronic copy of this document may be downloaded through the Internet at *http://www.regulations.gov.* Recently published rulemaking documents can also be accessed through the FAA's web page at *http://www.faa.gov/airports_airtraffic/air_traffic/publications/airspace_amendments/.*

You may review the public docket containing the proposal, any comments received, and any final disposition in person in the Dockets Office (see the **ADDRESSES** section for the address and phone number) between 9 a.m. and 5 p.m., Monday through Friday, except federal holidays. An informal docket may also be examined during normal business hours at the Northwest Mountain Regional Office of the Federal Aviation Administration, Air Traffic Organization, Western Service Center, Operations Support Group, 1601 Lind Avenue SW., Renton, WA 98057.

Persons interested in being placed on a mailing list for future NPRM's should contact the FAA's Office of Rulemaking, (202) 267–9677, for a copy of Advisory Circular No. 11–2A, Notice of Proposed Rulemaking Distribution System, which describes the application procedure.

The Proposal

The FAA is proposing an amendment to Title 14 Code of Federal Regulations (14 CFR) Part 71 by modifying Class D airspace and Class E airspace designated as surface area to meet current standards for IFR departures and arrivals at Bellingham International Airport, Bellingham, WA. This modification eliminates the need for Class E airspace designated as an extension to a Class D or E surface area, and, therefore, would be removed. This action, initiated by a biennial review of the airspace, is necessary for the safety and management of aircraft departing and arriving under IFR operations at the airport.

Class D and E airspace designations are published in paragraph 5000, 6002 and 6004, respectively, of FAA Order 7400.9V, dated August 9, 2011, and effective September 15, 2011, which is incorporated by reference in 14 CFR Part 71.1. The Class D and E airspace designation listed in this document will be published subsequently in this Order.

The FAA has determined this proposed regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. Therefore, this proposed regulation; (1) is not a ''significant regulatory action'' under Executive Order 12866; (2) is not a ''significant rule'' under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a

regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified this proposed rule, when promulgated, would not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

The FAA's authority to issue rules regarding aviation safety is found in Title 49 of the U.S. Code. Subtitle 1, Section 106, describes the authority for the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency's authority. This rulemaking is promulgated under the authority described in Subtitle VII, Part A, Subpart I, Section 40103. Under that section, the FAA is charged with prescribing regulations to assign the use of the airspace necessary to ensure the safety of aircraft and the efficient use of airspace. This proposal is within the scope of that authority as it modifies controlled airspace at Bellingham International Airport, Bellingham, WA.

This proposal will be subject to an environmental analysis in accordance with FAA Order 1050.1E. ''Environmental Impacts: Policies and Procedures'' prior to any FAA final regulatory action.

List of Subjects in 14 CFR Part 71

Airspace, Incorporation by reference, Navigation (air).

The Proposed Amendment

Accordingly, pursuant to the authority delegated to me, the Federal Aviation Administration proposes to amend 14 CFR Part 71 as follows:

PART 71—DESIGNATION OF CLASS A, B, C, D AND E AIRSPACE AREAS; AIR TRAFFIC SERVICE ROUTES; AND REPORTING POINTS

1. The authority citation for 14 CFR Part 71 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40103, 40113, 40120; E.O. 10854, 24 FR 9565, 3 CFR, 1959–1963 Comp., p. 389.

§ 71.1 [Amended]

2. The incorporation by reference in 14 CFR Part 71.1 of the Federal Aviation Administration Order 7400.9V, Airspace Designations and Reporting Points, dated August 9, 2011, and effective September 15, 2011 is amended as follows:

Paragraph 5000 Class D airspace.

* * * * *

ANM WA D Bellingham, WA [Modified]

Bellingham International Airport, WA

(Lat. 48°47′34″ N., long. 122°32′15″ W.)

That airspace extending upward from the surface to and including 2,700 feet MSL within a 4.1-mile radius of Bellingham International Airport. This Class D airspace is effective during the dates and times established in advance by a Notice to Airmen. The effective date and time will thereafter be continuously published in the Airport/Facility Directory.

Paragraph 6002 Class E airspace designated as surface areas.

* * * * *

ANM WA E2 Bellingham, WA [Modified]

Bellingham International Airport, WA

(Lat. 48°47′34″ N., long. 122°32′15″ W.)

That airspace extending upward from the surface within a 4.1-mile radius of Bellingham International Airport. This Class E airspace is effective during the dates and times established in advance by a Notice to Airmen. The effective date and time will thereafter be continuously published in the Airport/Facility Directory.

Paragraph 6004 Class E airspace areas designated as an extension to Class D or Class E surface area.

* * * * *

ANM WA E4 Bellingham, WA [Removed]

Issued in Seattle, Washington, on March 19, 2012.

Vered Lovett,

Acting Manager, Operations Support Group, Western Service Center.

[FR Doc. 2012–7232 Filed 3–23–12; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2012–0155; Airspace Docket No. 12–ASW–1]

Proposed Establishment of Class E Airspace; West Memphis, AR

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This action proposes to establish Class E airspace at West Memphis, AR. Separation of existing Class E airspace surrounding West Memphis Municipal Airport from the Class E airspace of Memphis International Airport, Memphis, TN, has made this action necessary to enhance the safety and management of Instrument Flight Rules (IFR) operations at the airport.

DATES: 0901 UTC. Comments must be received on or before May 10, 2012.

ADDRESSES: Send comments on this proposal to the U.S. Department of Transportation, Docket Operations, 1200 New Jersey Avenue SE., West Building Ground Floor, Room W12–140, Washington, DC 20590–0001. You must identify the docket number FAA–2012–0155/Airspace Docket No. 12–ASW–1, at the beginning of your comments. You may also submit comments through the Internet at *http://www.regulations.gov.* You may review the public docket containing the proposal, any comments received, and any final disposition in person in the Dockets Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Office (telephone 1–800–647–5527) is on the ground floor of the building at the above address.

FOR FURTHER INFORMATION CONTACT: Scott Enander, Central Service Center, Operations Support Group, Federal Aviation Administration, Southwest Region, 2601 Meacham Blvd., Fort Worth, TX 76137; telephone: (817) 321–7716.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested parties are invited to participate in this proposed rulemaking by submitting such written data, views, or arguments, as they may desire. Comments that provide the factual basis supporting the views and suggestions presented are particularly helpful in developing reasoned regulatory decisions on the proposal. Comments are specifically invited on the overall regulatory, aeronautical, economic, environmental, and energy-related aspects of the proposal. Communications should identify both docket numbers and be submitted in triplicate to the address listed above. Commenters wishing the FAA to acknowledge receipt of their comments on this notice must submit with those comments a self-addressed, stamped postcard on which the following statement is made: ''Comments to Docket No. FAA–2012–0155/Airspace Docket No. 12–ASW–1.'' The postcard will be date/time stamped and returned to the commenter.

Availability of NPRMs

An electronic copy of this document may be downloaded through the Internet at *http://www.regulations.gov.* Recently published rulemaking documents can also be accessed through the FAA's Web page at *http://www.faa.gov/airports_airtraffic/air_traffic/publications/airspace_amendments/.*

You may review the public docket containing the proposal, any comments

received and any final disposition in person in the Dockets Office (see **ADDRESSES** section for address and phone number) between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. An informal docket may also be examined during normal business hours at the office of the Central Service Center, 2601 Meacham Blvd., Fort Worth, TX 76137.

Persons interested in being placed on a mailing list for future NPRMs should contact the FAA's Office of Rulemaking (202) 267–9677, to request a copy of Advisory Circular No. 11–2A, Notice of Proposed Rulemaking Distribution System, which describes the application procedure.

The Proposal

This action proposes to amend Title 14, Code of Federal Regulations (14 CFR), Part 71 by establishing Class E airspace extending upward from 700 feet above the surface at West Memphis, AR, to accommodate the separation of existing Class E airspace surrounding West Memphis Municipal Airport from the Class E airspace of Memphis International Airport, Memphis, TN. The amendment for the existing Class E airspace surrounding Memphis International Airport, Memphis, TN, would be simultaneously coordinated with this action. Controlled airspace is needed for the safety and management of IFR operations at the airport.

Class E airspace areas are published in Paragraph 6005 of FAA Order 7400.9V, dated August 9, 2011 and effective September 15, 2011, which is incorporated by reference in 14 CFR 71.1. The Class E airspace designation listed in this document would be published subsequently in the Order.

The FAA has determined that this proposed regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. It, therefore, (1) is not a ''significant regulatory action'' under Executive Order 12866; (2) is not a ''significant rule'' under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a Regulatory Evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule, when promulgated, will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

The FAA's authority to issue rules regarding aviation safety is found in Title 49 of the U.S. Code. Subtitle 1, Section 106 describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency's authority. This rulemaking is promulgated under the authority described in Subtitle VII, Part A, Subpart I, Section 40103. Under that section, the FAA is charged with prescribing regulations to assign the use of airspace necessary to ensure the safety of aircraft and the efficient use of airspace. This regulation is within the scope of that authority as it would establish controlled airspace at West Memphis Municipal Airport, West Memphis, AR.

This proposal will be subject to an environmental analysis in accordance with FAA Order 1050.1E, ''Environmental Impacts: Policies and Procedures,'' prior to any FAA final regulatory action.

List of Subjects in 14 CFR Part 71

Airspace, Incorporation by reference, Navigation (Air).

The Proposed Amendment

In consideration of the foregoing, the Federal Aviation Administration proposes to amend 14 CFR Part 71 as follows:

PART 71—DESIGNATION OF CLASS A, B, C, D, AND E AIRSPACE AREAS; AIR TRAFFIC SERVICE ROUTES; AND REPORTING POINTS

1. The authority citation for part 71 continues to read as follows:

Authority: 49 U.S.C. 106(g); 40103, 40113, 40120; E.O. 10854, 24 FR 9565, 3 CFR, 1959–1963 Comp., p. 389.

§ 71.1 [Amended]

2. The incorporation by reference in 14 CFR 71.1 of FAA Order 7400.9V, Airspace Designations and Reporting Points, dated August 9, 2011, and effective September 15, 2011, is amended as follows:

Paragraph 6005 Class E Airspace areas extending upward from 700 feet or more above the surface of the earth.

* * * * *

ASW AR E5 West Memphis, AR [New]

West Memphis Municipal Airport, AR
(Lat. 35°08′06″ N., long. 90°14′04″ W.)

That airspace extending upward from 700 feet above the surface within a 6.5-mile radius of West Memphis Municipal Airport.

Issued in Fort Worth, TX, on March 14, 2012.

David P. Medina,

Manager, Operations Support Group, ATO Central Service Center.

[FR Doc. 2012–7096 Filed 3–23–12; 8:45 am]

BILLING CODE 4901–13–P

DEPARTMENT OF HOMELAND SECURITY

U.S. Customs and Border Protection

DEPARTMENT OF THE TREASURY

19 CFR Part 12

[Docket No. USCBP–2012–0004]

RIN 1515–AD82

Inadmissibility of Consumer Products and Industrial Equipment Noncompliant With Applicable Energy Conservation or Labeling Standards

AGENCIES: U.S. Customs and Border Protection, Department of Homeland Security; Department of the Treasury.

ACTION: Notice of proposed rulemaking.

SUMMARY: This document proposes amendments to the Customs and Border Protection (CBP) regulations to provide that if certain imports do not comply with applicable energy conservation or labeling standards, CBP will refuse admission when so notified by the Department of Energy (DOE) or the Federal Trade Commission (FTC) and CBP may, upon a recommendation from DOE or FTC, conditionally release the goods so that they may be brought into compliance. Specifically, CBP will refuse admission into the customs territory of the United States to consumer products and industrial equipment deemed noncompliant with the Energy Policy and Conservation Act of 1975 (EPCA) and its implementing regulations, and for which CBP has received written notice from the DOE or the FTC that identifies merchandise as noncompliant with applicable EPCA requirements. In lieu of immediate refusal of admission, and upon written or electronic notice by DOE or FTC, CBP may conditionally release under bond to the importer such noncompliant products or equipment for purposes of reconditioning, re-labeling, or other action so as to bring the subject product or equipment into compliance with applicable energy conservation and labeling admissibility standards. If the subject import is not timely brought into compliance, CBP, at the direction of DOE or FTC, will issue a refusal of admission notice to the importer and

demand redelivery of the subject products to CBP custody. A failure to comply with a demand for redelivery will result in the assessment of liquidated damages. This proposed regulation, if adopted, will implement the mandate of the EPCA, as amended, to preclude admission into the United States of certain consumer products and industrial equipment that do not meet applicable labeling or energy conservation requirements.

DATES: Comments must be received on or before May 25, 2012.

ADDRESSES: You may submit comments, identified by *USCBP docket number,* by *one* of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments via docket number USCBP–2012–0004.
- *Mail:* Trade and Commercial Regulations Branch, Regulations and Rulings, Office of International Trade, U.S. Customs and Border Protection, 799 9th Street NW. (Mint Annex), Washington, DC 20229–1179.

Instructions: All submissions received must include the agency name and USCBP docket number for this rulemaking. All comments received will be posted without change to *http://www.regulations.gov,* including any personal information provided. For detailed instructions on submitting comments and additional information on the rulemaking process, see the ''Public Participation'' heading of the **SUPPLEMENTARY INFORMATION** section of this document.

Docket: For access to the docket to read background documents or comments received, go to *http://www.regulations.gov.* Submitted comments may also be inspected during regular business days between the hours of 9 a.m. and 4:30 p.m. at the Trade and Commercial Regulations Branch, Regulations and Rulings, Office of International Trade, U.S. Customs and Border Protection, 799 9th Street NW., 5th Floor, Washington, DC. Arrangements to inspect submitted comments should be made in advance by calling Joseph Clark at (202) 325–0118.

FOR FURTHER INFORMATION CONTACT: Mike Craig, Chief, Interagency Requirements Branch, Trade Policy and Programs, Office of International Trade, (202) 863–6558. Valarie M. Neuhart, Import Safety & Interagency Requirements Division, Office of International Trade, (202) 863–6223.

SUPPLEMENTARY INFORMATION:

Public Participation

Interested persons are invited to participate in this rulemaking by submitting written data, views, or arguments on all aspects of the proposed rule. Customs and Border Protection (CBP) also invites comments that relate to the economic, environmental, or federalism effects that might result from this proposed rule. If appropriate to a specific comment, the commenter should reference the specific portion of the proposed rule, explain the reason for any recommended change, and include data, information, or authority that support such recommended change.

Background

General

Title III, Part B of the Energy Policy and Conservation Act of 1975 (EPCA), Public Law 94–163 (42 U.S.C. 6291–6309), as amended, established the Energy Conservation Program for Consumer Products Other Than Automobiles, a program covering most major household appliances. Similarly, Title III, Part C of the EPCA, (42 U.S.C. 6311–6317) as amended, added by Public Law 95–619, Title IV, section 441(a), established the Energy Conservation Program for Certain Industrial Equipment, a program covering industrial equipment.

Section 6302(a) of title 42 of the United States Code (42 U.S.C. 6302(a)), and its implementing regulations, prescribe the specific energy conservation and labeling standards applicable to manufacturers and, in some instances, private labelers, distributors, and retailers. Sections 6301 and 6316 of title 42 of the United States Code (42 U.S.C. 6301 and 6316) require the Secretary of the Treasury to issue regulations refusing admission into the customs territory of the United States to covered products or covered equipment offered for importation in violation of 42 U.S.C. 6302. The statute also provides the Secretary with the discretion to authorize the importation of covered products or covered industrial equipment under such terms and conditions (including the furnishing of a bond) that ensure that the merchandise will not violate 42 U.S.C. 6302.

Proposed Regulation

Pursuant to 42 U.S.C. 6301, this document proposes to amend part 12 of title 19 of the Code of Federal Regulations (19 CFR Part 12) by adding a new § 12.50 which provides that CBP will refuse admission into the customs territory of the United States to covered imports that the Department of Energy (DOE) or the Federal Trade Commission (FTC) has determined to be in violation of 42 U.S.C. 6302, upon receipt of written or electronic notice from the DOE or FTC, as appropriate. The notice will identify a named regulated party as being in violation of 42 U.S.C. 6302 and will describe the subject product or equipment in a manner sufficient to enable CBP to identify the articles.

While refusal of admission will be the norm, there may be instances where reconditioning, re-labeling, or other modification may bring an import into compliance with applicable energy conservation or labeling admissibility standards. Accordingly, this rule proposes a procedure to allow CBP to conditionally release noncompliant imports to the importer under a CBP basic importation and entry bond for purposes of bringing the merchandise into conformity with the applicable standards, upon a recommendation by the DOE or FTC. In any case involving conditional release of a covered import under bond, the CBP port director always retains the discretion to require additional security in any case where he believes that acceptance of a continuous bond would hamper the enforcement of the law. *See* 19 CFR 113.13(d). An initial conditional release period of 30 days is proposed to be established by this rulemaking.

If the DOE or FTC notifies CBP that the subject imports have been brought into compliance with applicable energy conservation and labeling admissibility standards before the conclusion of the 30-day conditional release period, or any authorized extension thereof, CBP may release the subject goods into the commerce and entry may be completed.

If attempts at modification fail within the 30-day conditional release period, or any authorized extension thereof, the DOE or FTC will notify CBP of that fact, and CBP will issue a notice of refusal of admission to the importer concurrent with a demand for redelivery under the terms and conditions of the CBP bond. A failure to comply with the demand for redelivery will result in the assessment of liquidated damages equal to three times the value of the imports at issue. Moreover, covered imports that are conditionally released will be under the concurrent jurisdiction of DOE and/or FTC.

The proposed amendments are consistent with § 429.5(b) of title 10 of the Code of Federal Regulations (10 CFR 429.5(b)), which is a DOE regulation that further notifies the importing public that any covered product or equipment offered for importation that does not meet the applicable energy

conservation standards set forth in 42 U.S.C. 6291–6317 will be refused admission into the customs territory of the United States under CBP issued regulations.

Executive Order 12866

Executive Orders 13563 and 12866 direct agencies to assess costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility. This rule has been designated a ''significant regulatory action'' although not economically significant, under section 3(f) of Executive Order 12866. Accordingly, the rule has been reviewed by the Office of Management and Budget.

The Regulatory Flexibility Act

This section examines the impact of the rule on small entities as required by the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*), as amended by the Small Business Regulatory Enforcement and Fairness Act of 1996. A small entity may be a small business (defined as any independently owned and operated business not dominant in its field that qualifies as a small business per the Small Business Act); a small not-for-profit organization; or a small governmental jurisdiction (locality with fewer than 50,000 people).

The proposed rule, if finalized, will establish a procedure whereby the DOE or the FTC will notify CBP of any imported article that is in violation of 42 U.S.C 6302 and its implementing regulations. Upon notification, CBP will refuse these articles admission into the commerce of the United States. Upon a recommendation by the DOE or FTC, however, CBP will conditionally release noncompliant imported articles under a CBP basic importation and entry bond for the purpose of bringing the merchandise into compliance with 42 U.S.C. 6302 and its implementing regulations. This conditional release is valid for a period of 30 days, but it may be extended by the DOE or FTC.

The DOE has identified only a small number of businesses importing noncompliant articles, of which fewer than five were small entities. When notified of their noncompliance, each of these businesses ceased importation of these articles. Given the small number of small entities identified by DOE as having been noncompliant and that the law prohibiting the importation of these noncompliant articles within the United States was enacted in 1975, CBP does not anticipate a significant number of small entities attempting to import articles which violate 42 U.S.C 6302 and its implementing regulations. If a small entity does import an article in violation of 42 U.S.C 6302 and its implementing regulations, the small entity can request the DOE or the FTC allow CBP to grant the imported article a conditional release. CBP believes that cost associated with this conditional release to be negligible because this request is virtually costless to the small entity and the importer is already required to maintain a CBP basic importation and entry bond.

Accordingly, CBP does not believe this rule will have a significant impact on a substantial number of small entities. CBP welcomes any comments regarding this assessment. If CBP does not receive any comments contradicting this finding, CBP will certify that this rule will not have a significant economic impact on a substantial number of small entities at the final rule stage.

Paperwork Reduction Act

As there is no collection of information proposed in this document, the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. 3507) are inapplicable.

Signing Authority

This proposed regulation is being issued in accordance with 19 CFR 0.1(a)(1) pertaining to the Secretary of the Treasury's authority (or that of his delegate) to approve regulations related to certain customs revenue functions.

List of Subjects in 19 CFR Part 12

Customs duties and inspection, Electronic products, Entry of merchandise, Imports, Prohibited merchandise, Reporting and recordkeeping requirements, Restricted merchandise, Seizure and forfeiture.

Proposed Amendments to the CBP Regulations

For the reasons stated above, it is proposed to amend part 12 of title 19 of the Code of Federal Regulations (19 CFR Part 12) as set forth below.

PART 12—SPECIAL CLASSES OF MERCHANDISE

1. The general authority citation for part 12 continues to read as follows and the specific authority citation is added to read as follows:

Authority: 5 U.S.C. 301; 19 U.S.C. 66, 1202 (General Note 3(i), Harmonized Tariff Schedule of the United States (HTSUS)), 1624;

* * * * *

Section 12.50 also issued under 42 U.S.C. 6301;

* * * * *

2. A new center heading and new § 12.50 are added to read as follows:

Consumer Products and Industrial Equipment Subject to Energy Conservation or Labeling Standards

§ 12.50 Consumer products and industrial equipment subject to energy conservation or labeling standards.

(a) *Definitions.* For purposes of this section, the following terms have the meanings indicated:

Covered import. The term ''*covered import''* means a consumer product or industrial equipment that is classified by the Department of Energy as covered by an applicable energy conservation standard, or by the Federal Trade Commission as covered by an applicable energy labeling standard, pursuant to the Energy Policy and Conservation Act of 1975, as amended (42 U.S.C. 6291-6317), and that is imported or attempted to be imported.

DOE. The term ''*DOE''* means the Department of Energy.

Energy conservation standard. The term ''*energy conservation standard''* means any standard meeting the definitions of that term in 42 U.S.C. 6291(6) or 42 U.S.C. 6311(18).

FTC. The term ''*FTC''* means the Federal Trade Commission.

Noncompliant covered import. The term ''*noncompliant covered import''* means a covered import that the Department of Energy (DOE) or the Federal Trade Commission (FTC) has determined to be in violation of 42 U.S.C. 6302.

(b) *CBP action.* If a covered import does not comply with applicable energy conservation or labeling admissibility standards, the DOE or FTC may direct CBP to either refuse admission of the covered import pursuant to paragraph (c) of this section or recommend conditional release of the covered import to be brought into compliance pursuant to paragraph (d) of this section.

(c) *Refusal of admission.* CBP will refuse admission into the customs territory of the United States to any noncompliant covered import upon receipt of written or electronic notice from the DOE (*see also* 10 CFR 429.5) or FTC that identifies the importer of the noncompliant covered import and describes the subject import in a manner

sufficient to enable CBP to identify the article.

(d) *Conditional release.* In lieu of immediate refusal of admission into the customs territory of the United States, CBP, upon a recommendation from the DOE or FTC, may permit the release of a noncompliant covered import to the importer of record for purposes of reconditioning, re-labeling, or other modification. The release from CBP custody of any such covered import will be deemed conditional and subject to the bond conditions set forth in § 113.62 of this Chapter. Note: Conditionally released covered imports will also be subject to the jurisdiction of DOE and/or FTC.

(1) *Duration.* Unless extended in accordance with paragraph (d)(2) of this section, the conditional release period will terminate upon the earliest occurring of the following events:

(i) The date that CBP issues a notice of refusal of admission pursuant to paragraph (c) of this section;

(ii) The date that the DOE or FTC issues a notice to CBP stating that the covered import is in compliance and may proceed; or

(iii) At the conclusion of the 30-day period following the date of release.

(2) *Extension.* The conditional release period may be extended if both CBP and the importer of record receive, within the initial 30-day conditional release period or any subsequent authorized extension thereof, a written or electronic notice from the DOE or FTC stating the reason for and anticipated length of the extension.

(3) *Issuance of a redelivery notice and demand for redelivery.* If the noncompliant covered import is not timely brought into compliance, and if so directed by DOE or FTC, CBP will issue a refusal of admission notice to the importer pursuant to paragraph (c) of this section and, in addition, CBP will demand the redelivery of the specified covered product to CBP custody. The demand for redelivery may be made concurrently with the notice of refusal of admission.

(4) *Liquidated damages.* A failure to comply with a demand for redelivery made under this paragraph (d) will result in the assessment of liquidated damages equal to three times the value of the covered product. Value as used in this provision means value as determined under 19 U.S.C. 1401a.

Approved: March 20, 2012.

David V. Aguilar,

Acting Commissioner, U.S. Customs and Border Protection.

Timothy E. Skud,

Deputy Assistant Secretary of the Treasury.

[FR Doc. 2012–7105 Filed 3–23–12; 8:45 am]

BILLING CODE 9111–14–P

DEPARTMENT OF HOMELAND SECURITY

U.S. Customs and Border Protection

19 CFR Part 111

[USCBP–2010–0038]

RIN 1651–AA80

Permissible Sharing of Client Records by Customs Brokers

AGENCY: U.S. Customs and Border Protection, Department of Homeland Security.

ACTION: Withdrawal of notice of proposed rulemaking.

SUMMARY: This document withdraws a notice of proposed rulemaking, published in the **Federal Register** on October 27, 2010, that proposed amendments to the Customs and Border Protection (CBP) regulations that would allow brokers, upon the client's consent in a written authorization, to share client information with affiliated entities related to the broker so that these entities may offer non-customs business services to the broker's clients. Although the proposed rule was prepared in response to a request from a member of the broker community seeking to allow brokers to share clients' information for marketing purposes, there was opposition to the proposal from brokers due to the condition on sharing the information that CBP included in the document to protect importers' proprietary information. The notice is being withdrawn to permit further consideration of the relevant issues involved in the proposed rulemaking.

DATES: Effective March 26, 2012, the proposed rule published October 27, 2010, (75 FR 66050), is withdrawn.

FOR FURTHER INFORMATION CONTACT: Anita Harris, Chief, Broker Compliance Branch, Trade Policy and Programs, Office of International Trade, (202) 863–6069.

SUPPLEMENTARY INFORMATION:

Background

On October 27, 2010, Customs and Border Protection (CBP) published a notice of proposed rulemaking in the **Federal Register** (75 FR 66050) pertaining to the obligations of customs brokers to keep clients' information confidential. The proposed amendment would allow brokers, upon the client's written consent, to share client information with affiliated entities related to the broker so that these entities may offer non-customs business services to the broker's clients. The proposed amendment would also allow customs brokers to use a third-party to perform photocopying, scanning, and delivery of client records for the broker. These proposed changes were intended to update the regulations to reflect modern business practices, while protecting the confidentiality of client (importer) information. The comment period ended on December 27, 2010.

CBP received public comment on the proposed rulemaking. The majority of commenters expressed concern that the proposed rule did not serve the interests of the importing public. Specifically, there was opposition to the proposal from brokers due to the condition on sharing the information that CBP included in the document to protect importers' proprietary information.

Withdrawal of Notice of Proposed Rulemaking

CBP is withdrawing the notice published in the **Federal Register** (75 FR 66050) on October 27, 2010, pending further consideration of the relevant issues involved in the proposed rulemaking.

Dated: March 21, 2012.

David V. Aguilar,

Acting Commissioner, U.S. Customs and Border Protection.

[FR Doc. 2012–7223 Filed 3–23–12; 8:45 am]

BILLING CODE 9111–14–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R01–OAR–2009–0919; A–1–FRL–9651–9]

Approval and Promulgation of Air Quality Implementation Plans; Connecticut; Regional Haze

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing approval of a revision to the Connecticut State Implementation Plan (SIP) that addresses regional haze for the first planning period from 2008 through

2018. It was submitted by the Connecticut Department of Environmental Protection (now known as Connecticut Department of Energy and Environmental Protection, CT DEEP) on November 18, 2009, February, 24, 2012 and March 12, 2012. This revision addresses the requirements of the Clean Air Act (CAA) and EPA's rules that require States to prevent any future, and remedy any existing, manmade impairment of visibility in mandatory Class I areas (also referred to as the ''regional haze program''). States are required to assure reasonable progress toward the national goal of achieving natural visibility conditions in Class I areas.

DATES: Written comments must be received on or before April 25, 2012.

ADDRESSES: Submit your comments, identified by Docket ID Number EPA–R01–OAR–2009–0919 by one of the following methods:

1. *www.regulations.gov:* Follow the on-line instructions for submitting comments.

2. *Email: arnold.anne@epa.gov*.

3. *Fax:* (617) 918–0047.

4. *Mail:* ''Docket Identification Number EPA–R01–OAR–2009–0919 Anne Arnold, U.S. Environmental Protection Agency, EPA New England Regional Office, Office of Ecosystem Protection, Air Quality Planning Unit, 5 Post Office Square—Suite 100, (Mail code OEP05–2), Boston, MA 02109–3912.

5. *Hand Delivery or Courier:* Deliver your comments to: Anne Arnold, Manager, Air Quality Planning Unit, U.S. Environmental Protection Agency, EPA New England Regional Office, Office of Ecosystem Protection, Air Quality Planning Unit, 5 Post Office Square—Suite 100, (mail code OEP05–2), Boston, MA 02109–3912. Such deliveries are only accepted during the Regional Office's normal hours of operation. The Regional Office's official hours of business are Monday through Friday, 8:30 to 4:30, excluding legal holidays.

Instructions: Direct your comments to Docket ID No. EPA–R01–OAR–2009–0919. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at *www.regulations.gov*, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit through *www.regulations.gov*, or email, information that you consider to be CBI or otherwise protected. The *www.regulations.gov* Web site is an ''anonymous access'' system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to EPA without going through *www.regulations.gov* your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

Docket: All documents in the electronic docket are listed in the *www.regulations.gov* index. Although listed in the index, some information is not publicly available, i.e., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically in *www.regulations.gov* or in hard copy at Office of Ecosystem Protection, U.S. Environmental Protection Agency, EPA New England Regional Office, Office of Ecosystem Protection, Air Quality Planning Unit, 5 Post Office Square—Suite 100, Boston, MA. EPA requests that if at all possible, you contact the contact listed in the **FOR FURTHER INFORMATION CONTACT** section to schedule your inspection. The Regional Office's official hours of business are Monday through Friday, 8:30 to 4:30, excluding legal holidays.

In addition, copies of the State submittal are also available for public inspection during normal business hours, by appointment at the Bureau of Air Management, Department of Energy and Environmental Protection, State Office Building, 79 Elm Street, Hartford, CT 06106–1630.

FOR FURTHER INFORMATION CONTACT: Anne McWilliams, Air Quality Unit, U.S. Environmental Protection Agency, EPA New England Regional Office, 5 Post Office Square—Suite 100, (Mail Code OEP05–02), Boston, MA 02109–3912, telephone number (617) 918–1697, fax number (617) 918–0697, email *mcwilliams.anne@epa.go*.

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Throughout this document, wherever ''we,'' ''us,'' or ''our'' is used, we mean the EPA.

I. What is the background for EPA's proposed action?

A. The Regional Haze Problem

Regional haze is visibility impairment that is produced by a multitude of sources and activities which are located across a broad geographic area and emit fine particles and their precursors (e.g., sulfur dioxide, nitrogen oxides, and in some cases, ammonia and volatile organic compounds). Fine particle precursors react in the atmosphere to form fine particulate matter ($PM_{2.5}$) (e.g., sulfates, nitrates, organic carbon, elemental carbon, and soil dust), which also impair visibility by scattering and absorbing light. Visibility impairment reduces the clarity, color, and visible distance that one can see. $PM_{2.5}$ can also cause serious health effects and mortality in humans and contributes to environmental effects such as acid deposition.

Data from the existing visibility monitoring network, the ''Interagency Monitoring of Protected Visual Environments'' (IMPROVE) monitoring network, show that visibility impairment caused by air pollution occurs virtually all the time at most national park and wilderness areas. The average visual range in many Class I areas (i.e., national parks and memorial parks, wilderness areas, and international parks meeting certain size criteria) in the Western United States is 100–150 kilometers, or about one-half to two-thirds of the visual range that would exist without manmade air pollution. In most of the eastern Class I areas of the United States, the average visual range is less than 30 kilometers, or about one-fifth of the visual range that would exist under estimated natural conditions. See 64 FR 35715 (July 1, 1999).

B. Background Information

In section 169A(a)(1) of the 1977 Amendments to the CAA, Congress created a program for protecting visibility in the nation's national parks and wilderness areas. This section of the CAA establishes as a national goal the ''prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Class I Federal areas [1] which impairment results from manmade air pollution.'' On December 2, 1980, EPA promulgated regulations to address visibility impairment in Class I areas that is ''reasonably attributable'' to a single source or small group of sources, i.e., ''reasonably attributable visibility impairment'' (RAVI). See 45 FR 80084 (Dec. 2, 1980). These regulations represented the first phase in addressing visibility impairment. EPA deferred action on regional haze that emanates from a variety of sources until monitoring, modeling and scientific knowledge about the relationships between pollutants and visibility impairment were improved.

Congress added section 169B to the CAA in 1990 to address regional haze issues. EPA promulgated a rule to address regional haze on July 1, 1999 (64 FR 35714), the Regional Haze Rule. The Regional Haze Rule revised the existing visibility regulations to integrate into the regulation provisions addressing regional haze impairment and established a comprehensive visibility protection program for Class I areas. The requirements for regional haze, found at 40 CFR 51.308 and 51.309, are included in EPA's visibility protection regulations at 40 CFR 51.300–309. Some of the main elements of the regional haze requirements are summarized in Section II. The requirement to submit a regional haze SIP applies to all 50 States, the District of Columbia and the Virgin Islands. In 40 CFR 51.308(b), States are required to submit the first implementation plan addressing regional haze visibility impairment no later than December 17, 2007. On January 15, 2009, EPA found that 37 States, the District of Columbia and the U.S. Virgin Islands failed to submit this required implementation plan. See 74 FR 2392 (Jan. 15, 2009). In particular, EPA found that Connecticut failed to submit a plan that met the requirements of 40 CFR 51.308. See 74 FR 2393. On November 18, 2009, the Bureau of Air Management of the CT DEEP submitted revisions to the Connecticut State Implementation Plan (SIP) to address regional haze as required by 40 CFR 51.308. EPA has reviewed Connecticut's submittal and is proposing to find that it is consistent with the requirements of 40 CFR 51.308 as outlined in Section II.

C. Roles of Agencies in Addressing Regional Haze

Successful implementation of the regional haze program will require long-term regional coordination among States, tribal governments and various federal agencies. As noted above, pollution affecting the air quality in Class I areas can be transported over long distances, even hundreds of kilometers. Therefore, to effectively address the problem of visibility impairment in Class I areas, States need to develop strategies in coordination with one another, taking into account the effect of emissions from one jurisdiction on the air quality in another.

Because the pollutants that lead to regional haze can originate from sources located across broad geographic areas, EPA has encouraged the States and Tribes across the United States to address visibility impairment from a regional perspective. Five regional planning organizations (RPOs) were developed to address regional haze and related issues. The RPOs first evaluated technical information to better understand how their States and Tribes impact Class I areas across the country, and then pursued the development of regional strategies to reduce emissions of $PM_{2.5}$ and other pollutants leading to regional haze.

The Mid-Atlantic/Northeast Visibility Union (MANE–VU) RPO is a collaborative effort of State governments, tribal governments, and various federal agencies established to initiate and coordinate activities associated with the management of regional haze, visibility and other air quality issues in the Northeastern United States. Member State and Tribal governments include: Connecticut, Delaware, the District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Penobscot Indian Nation, Rhode Island, and Vermont.

D. The Relationship of the Clean Air Interstate Rule and the Cross-State Air Pollution Rule to Regional Haze Requirements

The Clean Air Interstate Rule (CAIR) required some states to reduce emissions of SO_2 and NO_X that contribute to violations of the 1997 National Ambient Air Quality Standards (NAAQS) for $PM_{2.5}$ and ozone. See 70 FR 25162 (May 12, 2005). CAIR established emissions budgets for SO_2 and NO_X. On October 13, 2006, EPA's ''Regional Haze Revisions to Provisions

[1] Areas designated as mandatory Class I Federal areas consist of national parks exceeding 6000 acres, wilderness areas and national memorial parks exceeding 5000 acres, and all international parks that were in existence on August 7, 1977 (42 U.S.C. 7472(a)). In accordance with section 169A of the CAA, EPA, in consultation with the Department of Interior, promulgated a list of 156 areas where visibility is identified as an important value (44 FR 69122, November 30, 1979). The extent of a mandatory Class I area includes subsequent changes in boundaries, such as park expansions (42 U.S.C. 7472(a)). Although States and Tribes may designate as Class I additional areas which they consider to have visibility as an important value, the requirements of the visibility program set forth in section 169A of the CAA apply only to ''mandatory Class I Federal areas.'' Each mandatory Class I Federal area is the responsibility of a ''Federal Land Manager'' (FLM). (42 U.S.C. 7602(i)). When we use the term ''Class I area'' in this action, we mean a ''mandatory Class I Federal area.''

Governing Alternative to Source-Specific Best Available Retrofit Technology (BART) Determinations; Final Rule'' (hereinafter known as the ''Alternative to BART Rule'') was published in the **Federal Register.** See 71 FR 60612. This rule establishes that states participating in the CAIR program need not require Best Available Retrofit Technology (BART) for SO_2 and NO_X at BART-eligible electric generating units (EGUs). Many States relied on CAIR as an alternative to BART for SO_2 and NO_X for their subject EGUs.

CAIR was later found to be inconsistent with the requirements of the CAA and the rule was remanded to EPA. *See North Carolina* v. *EPA,* 550 F.3d 1176 (D.C. Cir. 2008). The court left CAIR in place until replaced by EPA with a rule consistent with its opinion. *See North Carolina* v. *EPA,* 550 F.3d 1176, 1178 (D.C. Cir. 2008).

EPA promulgated the Cross-State Air Pollution Rule (CSAPR), to replace CAIR in 2011 (76 FR 48208, August 8, 2011). Connecticut was subject to ozone season NO_X controls under the CAIR program, however, the State was not subject to any of the requirements of CSAPR and thus the option to rely on CSAPR as an alternative to BART was not available to the State.

On December 30, 2011, the DC Circuit Court issued an order addressing the status of CSAPR and CAIR in response to motions filed by numerous parties seeking a stay of CSAPR pending judicial review. In that order, the D.C. Circuit stayed CSAPR pending the court's resolutions of the petitions for review of that rule in *EME Homer Generation, L.P.* v. *EPA* (No. 11–1302 and consolidated cases). The court also indicated that EPA is expected to continue to administer CAIR in the interim until the court rules on the petitions for review of CSAPR.

On December 15, 2011, Connecticut held a public hearing on proposed Regulations of Connecticut State Agencies (RCSA) section 22a–174–22d. This regulation, once adopted, will permanently maintain the ozone season NO_X emission reductions that were previously required under the CAIR program. Connecticut has requested the parallel processing of RCSA section 22a–174–22d with EPA's action on the Connecticut Regional Haze SIP revision. Under this procedure, EPA prepared this action before the State's final adoption of this regulation. Connecticut has indicated that they plan to have a final adopted regulation by June 2012, prior to our final action on its Regional Haze SIP. After Connecticut submits its final adopted regulation, EPA will review the regulation to determine whether it differs from the proposed regulation. If the final regulation does differ from the proposed regulation, EPA will determine whether these differences are significant. Ordinarily, changes that are limited to issues such as allocation methodology would not be deemed significant for SIP approval purposes, assuming the methodology does not lead to allocations in excess of the total state budget. Based on EPA's determination regarding the significance of any changes in the final regulation, EPA would then decide whether it is appropriate to prepare a final rule and describe the changes in the final rulemaking action, re-propose action based on the Connecticut's final adopted regulation, or other such action as may be appropriate.

RCSA 22a–174–22d is a replacement for RCSA 22a–174–22c, ''The Clean Air Interstate Rule (CAIR) Nitrogen Oxides (NO_X) Ozone Season Trading Program,'' which is federally approved by EPA and currently being implemented in Connecticut. Proposed regulation RCSA 22a–174–22d is one component of Connecticut's NO_X Alternative BART Program. This alternative program is discussed in detail in Section III.B.5.

II. What are the requirements for regional haze SIPs?

A. The CAA and the Regional Haze Rule (RHR)

Regional haze SIPs must assure reasonable progress towards the national goal of achieving natural visibility conditions in Class I areas. Section 169A of the CAA and EPA's implementing regulations require States to establish long-term strategies for making reasonable progress toward meeting this goal. Implementation plans must also give specific attention to certain stationary sources that were in existence on August 7, 1977, but were not in operation before August 7, 1962, and require these sources, where appropriate, to install Best Available Retrofit Technology (BART) controls for the purpose of eliminating or reducing visibility impairment. The specific regional haze SIP requirements are discussed in further detail below.

B. Determination of Baseline, Natural, and Current Visibility Conditions

The RHR establishes the deciview (dv) as the principal metric for measuring visibility. This visibility metric expresses uniform changes in haziness in terms of common increments across the entire range of visibility conditions, from pristine to extremely hazy conditions. Visibility is determined by measuring the visual range (or deciview), which is the greatest distance, in kilometers or miles, at which a dark object can be viewed against the sky. The deciview is a useful measure for tracking progress in improving visibility, because each deciview change is an equal incremental change in visibility perceived by the human eye. Most people can detect a change in visibility at one deciview.[2]

The deciview is used in expressing Reasonable Progress Goals (RPGs) (which are interim visibility goals towards meeting the national visibility goal), defining baseline, current, and natural conditions, and tracking changes in visibility. The regional haze SIPs must contain measures that ensure ''reasonable progress'' toward the national goal of preventing and remedying visibility impairment in Class I areas caused by manmade air pollution by reducing anthropogenic emissions that cause regional haze. The national goal is a return to natural conditions, i.e., manmade sources of air pollution would no longer impair visibility in Class I areas.

To track changes in visibility over time at each of the 156 Class I areas covered by the visibility program and as part of the process for determining reasonable progress, States must calculate the degree of existing visibility impairment at each Class I area within the State at the time of each regional haze SIP submittal and periodically review progress every five years midway through each 10-year planning period. To do this, the RHR requires States to determine the degree of impairment (in deciviews) for the average of the 20 percent least impaired (''best'') and 20 percent most impaired (''worst'') visibility days over a specified time period at each of their Class I areas. In addition, States must also develop an estimate of natural visibility conditions for the purposes of comparing progress toward the national goal. Natural visibility is determined by estimating the natural concentrations of pollutants that cause visibility impairment and then calculating total light extinction based on those estimates. EPA has provided guidance to States regarding how to calculate baseline, natural and current visibility conditions in documents entitled, *Guidance for Estimating Natural Visibility Conditions Under the Regional Haze Rule,* September 2003, (EPA–454/B–03–005) available at www.epa.gov/ttncaaa1/t1/memoranda/rh_envcurhr_gd.pdf (hereinafter referred to as ''EPA's 2003

[2] The preamble to the RHR provides additional details about the deciview. See 64 FR 35714, 35725 (July 1, 1999).

Natural Visibility Guidance''), and *Guidance for Tracking Progress Under the Regional Haze Rule,* September 2003 (EPA–454/B–03–004), available at www.epa.gov/ttncaaa1/t1/memoranda/rh_tpurhr_gd.pdf (hereinafter referred to as ''EPA's 2003 Tracking Progress Guidance'').

For the first regional haze SIPs that were due by December 17, 2007, ''baseline visibility conditions'' were the starting points for assessing ''current'' visibility impairment. Baseline visibility conditions represent the degree of impairment for the 20 percent least impaired days and 20 percent most impaired days at the time the regional haze program was established. Using monitoring data from 2000 through 2004, States are required to calculate the average degree of visibility impairment for each Class I area within the State, based on the average of annual values over the five year period. The comparison of initial baseline visibility conditions to natural visibility conditions indicates the amount of improvement necessary to attain natural visibility, while the future comparison of baseline conditions to the then current conditions will indicate the amount of progress made. In general, the 2000–2004 baseline period is considered the time from which improvement in visibility is measured.

C. Determination of Reasonable Progress Goals (RPGs)

The vehicle for ensuring continuing progress towards achieving the natural visibility goal is the submission of a series of regional haze SIPs from the States that establish RPGs for Class I areas for each (approximately) 10-year planning period. The RHR does not mandate specific milestones or rates of progress, but instead calls for States to establish goals that provide for ''reasonable progress'' toward achieving natural (i.e., ''background'') visibility conditions for their Class I areas. In setting RPGs, States must provide for an improvement in visibility for the most impaired days over the (approximately) 10-year period of the SIP, and ensure no degradation in visibility for the least impaired days over the same period.

States have significant discretion in establishing RPGs, but are required to consider the following factors established in the CAA and in EPA's RHR: (1) The costs of compliance; (2) the time necessary for compliance; (3) the energy and non-air quality environmental impacts of compliance; and (4) the remaining useful life of any potentially affected sources. States must demonstrate in their SIPs how these factors are considered when selecting the RPGs for the best and worst days for each applicable Class I area. See 40 CFR 51.308(d)(1)(i)(A). States have considerable flexibility in how they take these factors into consideration, as noted in EPA's July 1, 2007 memorandum from William L. Wehrum, Acting Administrator for Air and Radiation, to EPA Regional Administrators, EPA Regions 1–10, entitled *Guidance for Setting Reasonable Progress Goals under the Regional Haze Program* (p. 4–2, 5–1)(EPA's Reasonable Progress Guidance). In setting the RPGs, States must also consider the rate of progress needed to reach natural visibility conditions by 2064 (referred to as the ''uniform rate of progress'' or the ''glide path'') and the emission reduction measures needed to achieve that rate of progress over the 10-year period of the SIP. The year 2064 represents a rate of progress which States are to use for analytical comparison to the amount of progress they expect to achieve. In setting RPGs, each State with one or more Class I areas (''Class I State'') must also consult with potentially ''contributing States,'' i.e., other nearby States with emission sources that may be contributing to visibility impairment at the Class I State's areas. See 40 CFR 51.308(d)(1)(iv).

D. Best Available Retrofit Technology (BART)

Section 169A of the CAA directs States to evaluate the use of retrofit controls at certain larger, often uncontrolled, older stationary sources in order to address visibility impacts from these sources. Specifically, the CAA requires States to revise their SIPs to contain such measures as may be necessary to make reasonable progress towards the natural visibility goal, including a requirement that certain categories of existing stationary sources built between 1962 and 1977 procure, install, and operate the ''Best Available Retrofit Technology'' as determined by the State. (CAA 169A(b)(2)a)).[3] States are directed to conduct BART determinations for such sources that may be anticipated to cause or contribute to any visibility impairment in a Class I area. Rather than requiring source-specific BART controls, States also have the flexibility to adopt an emissions trading program or other alternative program as long as the alternative provides greater reasonable progress towards improving visibility than BART.

On July 6, 2005, EPA published the *Guidelines for BART Determinations Under the Regional Haze Rule* at Appendix Y to 40 CFR part 51 (hereinafter referred to as the ''BART Guidelines'') to assist States in determining which of their sources should be subject to the BART requirements and in determining appropriate emission limits for each applicable source. In making a BART applicability determination for a fossil fuel-fired electric generating plant with a total generating capacity in excess of 750 megawatts (MW), a State must use the approach set forth in the BART Guidelines. A State is encouraged, but not required, to follow the BART Guidelines in making BART determinations for other types of sources.

States must address all visibility impairing pollutants emitted by a source in the BART determination process. The most significant visibility impairing pollutants are sulfur dioxide (SO_2), nitrogen oxides (NO_X), and particulate matter (PM). EPA has stated that States should use their best judgment in determining whether volatile organic compounds (VOCs), or ammonia (NH_3) and ammonia compounds impair visibility in Class I areas.

The RPOs provided air quality modeling to the States to help them in determining whether potential BART sources can be reasonably expected to cause or contribute to visibility impairment in a Class I area. Under the BART Guidelines, States may select an exemption threshold value for their BART modeling, below which a BART eligible source would not be expected to cause or contribute to visibility impairment in any Class I area. The State must document this exemption threshold value in the SIP and must state the basis for its selection of that value. Any source with emissions that model above the threshold value would be subject to a BART determination review. The BART Guidelines acknowledge varying circumstances affecting different Class I areas. States should consider the number of emission sources affecting the Class I areas at issue and the magnitude of the individual sources' impacts. Any exemption threshold set by the State should not be higher than 0.5 deciviews. See 70 FR 39161 (July 6, 2005).

In their SIPs, States must identify potential BART sources, described as ''BART-eligible sources'' in the RHR, and document their BART control determination analyses. The term ''BART-eligible source'' used in the

[3] The set of ''major stationary sources'' potentially subject to BART are listed in CAA section 169A(g)(7).

BART Guidelines means the collection of individual emission units at a facility that together comprises the BART-eligible source. See 70 FR 39161 (July 6, 2005). In making BART determinations, section 169A(g)(2) of the CAA requires that States consider the following factors: (1) The costs of compliance; (2) the energy and non-air quality environmental impacts of compliance; (3) any existing pollution control technology in use at the source; (4) the remaining useful life of the source; and (5) the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology. States are free to determine the weight and significance to be assigned to each factor. See 70 FR 39170 (July 6, 2005).

A regional haze SIP must include source-specific BART emission limits and compliance schedules for each source subject to BART. Once a State has made its BART determination, the BART controls must be installed and in operation as expeditiously as practicable, but no later than five years after the date of EPA approval of the regional haze SIP, as required by CAA (section 169(g)(4)) and the RHR (40 CFR 51.308(e)(1)(iv)). In addition to what is required by the RHR, general SIP requirements mandate that the SIP must also include all regulatory requirements related to monitoring, recordkeeping, and reporting for the BART controls on the source. States have the flexibility to choose the type of control measures they will use to meet the requirements of BART.

E. Long-Term Strategy (LTS)

In 40 CFR 51.308(d)(3) of the RHR, States are required to include a LTS in their SIPs. The LTS is the compilation of all control measures a State will use to meet any applicable RPGs. The LTS must include ''enforceable emissions limitations, compliance schedules, and other measures as necessary to achieve the reasonable progress goals'' for all Class I areas within, or affected by emissions from, the State. See 40 CFR 51.308(d)(3).

When a State's emissions are reasonably anticipated to cause or contribute to visibility impairment in a Class I area located in another State, the RHR requires the impacted State to coordinate with the contributing States in order to develop coordinated emissions management strategies. See 40 CFR 51.308(d)(3)(i). In such cases, the contributing State must demonstrate that it has included in its SIP all measures necessary to obtain its share of the emission reductions needed to meet the RPGs for the Class I area. The RPOs have provided forums for significant interstate consultation, but additional consultations between States may be required to sufficiently address interstate visibility issues. This is especially true where two States belong to different RPOs.

States should consider all types of anthropogenic sources of visibility impairment in developing their LTS, including stationary, minor, mobile, and area sources. At a minimum, States must describe how each of the seven factors listed below is taken into account in developing their LTS: (1) Emission reductions due to ongoing air pollution control programs, including measures to address RAVI; (2) measures to mitigate the impacts of construction activities; (3) emissions limitations and schedules for compliance to achieve the RPG; (4) source retirement and replacement schedules; (5) smoke management techniques for agricultural and forestry management purposes including plans as currently exist within the State for these purposes; (6) enforceability of emissions limitations and control measures; (7) the anticipated net effect on visibility due to projected changes in point, area, and mobile source emissions over the period addressed by the LTS. See 40 CFR 51.308(d)(3)(v).

F. Coordinating Regional Haze and Reasonably Attributable Visibility Impairment (RAVI) LTS

As part of the RHR, EPA revised 40 CFR 51.306(c) regarding the LTS for RAVI to require that the RAVI plan must provide for a periodic review and SIP revision not less frequently than every three years until the date of submission of the State's first plan addressing regional haze visibility impairment, which was due December 17, 2007, in accordance with 40 CFR 51.308(b) and (c). On or before this date, the State must revise its plan to provide for review and revision of a coordinated LTS for addressing reasonably attributable and regional haze visibility impairment, and the State must submit the first such coordinated LTS with its first regional haze SIP. Future coordinated LTS's, and periodic progress reports evaluating progress towards RPGs, must be submitted consistent with the schedule for SIP submission and periodic progress reports set forth in 40 CFR 51.308(f) and 51.308(g), respectively. The periodic reviews of a State's LTS must report on both regional haze and RAVI impairment and must be submitted to EPA as a SIP revision.

G. Monitoring Strategy and Other Implementation Plan Requirements

In 40 CFR 51.308(d)(4), the RHR requires a monitoring strategy for measuring, characterizing, and reporting of regional haze visibility impairment that is representative of all mandatory Class I Federal areas within the State. The strategy must be coordinated with the monitoring strategy required in 40 CFR 51.305 for RAVI. Compliance with this requirement may be met through participation in the Interagency Monitoring of Protected Visual Environments (IMPROVE) network. The monitoring strategy is due with the first regional haze SIP, and it must be reviewed every five years. The monitoring strategy must also provide for additional monitoring sites if the IMPROVE network is not sufficient to determine whether RPGs will be met.

The SIP must also provide for the following:

- Procedures for using monitoring data and other information in a State with mandatory Class I areas to determine the contribution of emissions from within the State to regional haze visibility impairment at Class I areas both within and outside the State;
- Procedures for using monitoring data and other information in a State with no mandatory Class I areas to determine the contribution of emissions from within the State to regional haze visibility impairment at Class I areas in other States;
- Reporting of all visibility monitoring data to the Administrator at least annually for each Class I area in the State, and where possible, in electronic format;
- Developing a statewide inventory of emissions of pollutants that are reasonably anticipated to cause or contribute to visibility impairment in any Class I area. The inventory must include emissions for a baseline year, emissions for the most recent year for which data are available, and estimates of future projected emissions. A State must also make a commitment to update the inventory periodically; and
- Other elements, including reporting, recordkeeping, and other measures necessary to assess and report on visibility.

Pursuant to 40 CFR 51.308(f) of the RHR, state control strategies must cover an initial implementation period extending to the year 2018, with a comprehensive reassessment and revision of those strategies, as appropriate, every 10 years thereafter. Periodic SIP revisions must meet the core requirements of 40 CFR 51.308(d) with the exception of BART. The BART

provisions of 40 CFR 51.308(e), as noted above, apply only to the first implementation period. Periodic SIP revisions will assure that the statutory requirement of reasonable progress will continue to be met.

H. Consultation With States and Federal Land Managers (FLMs)

The RHR requires that States consult with FLMs before adopting and submitting their SIPs. See 40 CFR 51.308(i). States must provide FLMs an opportunity for consultation, in person and at least 60 days prior to holding any public hearing on the SIP. This consultation must include the opportunity for the FLMs to discuss their assessment of impairment of visibility in any Class I area and to offer recommendations on the development of the RPGs and on the development and implementation of strategies to address visibility impairment. Further, a State must include in its SIP a description of how it addressed any comments provided by the FLMs. Finally, a SIP must provide procedures for continuing consultation between the State and FLMs regarding the State's visibility protection program, including development and review of SIP revisions, five-year progress reports, and the implementation of other programs having the potential to contribute to impairment of visibility in Class I areas.

III. What is EPA's analysis of Connecticut's regional haze SIP submittal?

On November 18, 2009, February, 24, 2012, and March 12, 2012, CT DEEP's Bureau of Air Management submitted revisions to the Connecticut SIP to address regional haze as required by 40 CFR 51.308. EPA has reviewed Connecticut's submittal and is proposing to find that it is consistent with the requirements of 40 CFR 51.308 as outlined in Section II. A detailed analysis follows.

Connecticut is responsible for developing a regional haze SIP which addresses Connecticut's impact on any nearby Class I areas. As Connecticut has no Class I areas within its borders, Connecticut is not required to address the following Regional Haze SIP elements: (a) Calculation of baseline and natural visibility conditions; (b) establishment of reasonable progress goals; (c) monitoring requirements; and d) RAVI requirements.

A. Connecticut's Impact on MANE–VU Class I Areas

Connecticut is a member of the MANE–VU RPO. The MANE–VU RPO contains seven Class I areas in four States: Moosehorn Wilderness Area, Acadia National Park, and Roosevelt/Campobello International Park in Maine; Presidential Range/Dry River Wilderness Area and Great Gulf Wilderness Area in New Hampshire; Brigantine Wilderness Area in New Jersey; and Lye Brook Wilderness Area in Vermont.

Through source apportionment modeling, MANE–VU assisted States in determining their contribution to the visibility impairment of each Class I area in the MANE–VU region. Connecticut and the other MANE–VU States adopted a weight-of-evidence approach which relied on several independent methods for assessing the contribution of different sources and geographic source regions to regional haze in the northeastern and mid-Atlantic portions of the United States. Details about each technique can be found in the Northeast States for Coordinated Air Use Management (NESCAUM) document *Contributions to Regional Haze in the Northeast and Mid-Atlantic United States,* August 2006 (hereinafter referred to as the ''Contribution Report'').[4]

The source apportionment modeling demonstrated that the contribution of Connecticut emissions to total sulfate (the main contributor to visibility impairment in the Northeast, see Section III.C.3) was consistently determined to be no more than 0.76% of the total sulfate at any Class I area. This finding was consistently predicted by different assessment techniques that are based on the application of disparate chemical, meteorological and physical principles. The greatest modeled contribution from Connecticut for each of the MANE–VU Class I areas was 0.76% sulfate at Acadia National Park, 0.56% sulfate at Moosehorn Wilderness Area and Roosevelt Campobello International Park, 0.48% sulfate at Great Gulf Wilderness Area and Presidential Range—Dry River Wilderness Area, 0.55% sulfate at Lye Brook Wilderness Area, and 0.53% at Brigantine Wilderness Area. The impact of sulfate on visibility is discussed in greater detail below.

The MANE–VU Class I States determined that any State contributing at least 2.0% of the total sulfate observed on the 20 percent worst visibility days in 2002 were contributors to visibility impairment at the Class I area. Connecticut, Rhode Island, Vermont, and the District of Columbia were determined to contribute less than 2.0% of sulfate at any of the Class I areas in the Northeast.

EPA is proposing to find that CT DEEP has adequately demonstrated that emissions from Connecticut sources do not cause or contribute to visibility impairment in nearby Class I Areas.

B. Best Available Retrofit Technology (BART)

According to 51.308(e), ''The State must submit an implementation plan containing emission limitations representing BART and schedules for compliance with BART for each BART-eligible source that may reasonably be anticipated to cause or contribute to any impairment of visibility in any Class I Federal area, unless the State demonstrates that an emissions trading program or other alternative will achieve greater reasonable progress toward natural visibility conditions.'' On October 13, 2006, EPA's ''Regional Haze Regulations to Provisions Governing Alternative to Source-Specific Best Available Retrofit Technology (BART) Determinations; Final Rule'' (hereinafter known as the ''Alternative to BART Rule'') was published in the **Federal Register**. See 71 FR 60612. Connecticut chose to demonstrate that programs already developed by the State provide greater progress in visibility improvement than source-by-source BART determinations. A demonstration that the alternative program will achieve greater reasonable progress than would have resulted from the installation and operation of BART at all sources subject to BART in the state must be based on the following:

(1) A list of all BART-eligible sources within the State.

(2) A list of all BART-eligible sources and all BART source categories covered by the alternative program.

(3) Determination of the BART benchmark. If the alternative program has been designed to meet a requirement other than BART, as in the case of Connecticut, the State may determine the best system of continuous emission control technology and associated emission reductions for similar types of sources within a source category based on both source specific and category-wide information, as appropriate.

(4) An analysis of the projected emission reductions achieved through the alternative program.

(5) A determination based on a clear weight of evidence that the alternative program achieves greater reasonable progress than would be achieved through the installation and operation of BART at the covered sources.

[4] The August 2006 NESCAUM document *Contributions to Regional Haze in the Northeast and Mid-Atlantic United States* has been provided as part of the docket to this proposed rulemaking.

1. Identification of All BART Eligible Sources

Determining BART-eligible sources is the first step in the BART process. BART-eligible sources in Connecticut were identified in accordance with the methodology in Appendix Y of the Regional Haze Rule, *Guidelines for BART Determinations Under the Regional Haze Rule, Part II, How to Identify BART–Eligible Sources.* See 70 FR 39158. This guidance consists of the following criteria:

- The unit falls into one of the listed source categories;
- The unit was constructed or reconstructed between 1962 and 1977; and
- The unit has the potential to emit over 250 tons per year of sulfur dioxide, nitrogen oxides, particulate matter, volatile organic compounds, or ammonia.

The BART Guidelines require States to address SO_2, NO_X, and particulate matter. States are allowed to use their best judgment in deciding whether VOC or ammonia emissions from a source are likely to have an impact on visibility in the area. The State of Connecticut addressed SO_2, NO_X, and used particulate matter less than 10 microns in diameter (PM_{10}) as an indicator for particulate matter to identify BART eligible units, as the BART Guidelines require. Consistent with the BART Guidelines, the State of Connecticut did not evaluate emissions of VOCs and ammonia in BART determinations due to the lack of impact on visibility in the area due to anthropogenic sources. The majority of VOC emissions in Connecticut are biogenic in nature. Therefore, the ability to further reduce total ambient VOC concentrations at Class I areas is limited. Point, area, and mobile sources of VOCs in Connecticut are already comprehensively controlled as part of an ozone attainment and maintenance strategy. With respect to ammonia, the overall ammonia inventory is very uncertain, but the amount of anthropogenic emissions at sources that were BART-eligible is relatively small, and no additional sources were identified that had greater than 250 tons per year ammonia and required a BART analysis.

The identification of BART sources in Connecticut was undertaken as part of a multi-State analysis conducted by the NESCAUM. NESCAUM worked with CT DEEP licensing engineers to review all sources and determine their BART eligibility. CT DEEP identified ten sources as BART-eligible. Pfizer Inc. Boilers No. 5, No. 8, and the Organic Synthesis Plant 2 (OSP2) were originally included in the list of BART-eligible units. On March 10, 2006, the CT DEEP issued Consent Order No. 8262 to Pfizer Inc. which caps the actual aggregated emissions from the boilers and OSP2 to less than 250 tons per year for each of the air pollutants NO_X, SO_2, and PM_{10}. Therefore, Pfizer's facility is no longer considered BART-eligible. The final BART-eligible sources are listed below.

TABLE 1—BART-ELIGIBLE SOURCES IN CONNECTICUT

Source, unit and location	Fuel	BART source category	2002 Emissions (ton/yr)	Highest 2002 visibility impact dv) [5]
Middletown Power LLC, Unit 3,* Middletown, CT	Residual Oil, Natural Gas	240 MW EGU	SO_2: 269 NO_X: 468	0.11
Middletown Power LLC, Unit 4,* Middletown, CT	Residual Oil, Natural Gas	400 MW EGU	SO_2: 308 NO_X: 145	0.06
Montville Power LLC, Unit 6, Montville, CT	Residual Oil Distillate Oil	410 MW EGU	SO_2: 794 NO_X: 312	0.16
Norwalk Power LLC, Unit 2, Norwalk, CT	Residual Oil	172 MW EGU	SO_2: 322 NO_X: 82	0.08
PSEG Power Connecticut LLC, Bridgeport Harbor Station, Unit 3, Bridgeport, CT.	Coal, Residual Oil	410 MW EGU	SO_2: 4,024 NO_X: 1,689	0.84
PSEG Power Connecticut LLC, New Haven Harbor Station, Unit 1, New Haven, CT.	Residual Oil, Distillate Oil, Natural Gas.	465 MW EGU	SO_2: 4,010 NO_X: 1,143	0.74
Cascades Boxboard Group—CT LLC, PFI Boiler, Versailles, CT.	Residual Oil, Natural Gas	275 MMbtu/hr Industrial Boiler.	SO_2: 0.5 NO_X: 215	0.03

*Located at a facility greater than 750 MW.

2. Identification of All BART Source Categories Covered by the Alternative Program

In crafting Connecticut's alternative to BART demonstration, the State relied on SO_2 emission reductions required by Regulations of Connecticut State Agencies (RCSA section 22a–174–19a (Control of Sulfur Dioxide Emissions from Power Plant and Other Large Stationary Sources of Air Pollution). The Connecticut programs to reduce NO_X emissions are RCSA Section 22a–174–22 (Control of Nitrogen Oxide Emissions), and proposed RCSA Section 22a–174–22d (Post-2011 Connecticut Ozone Season NO_X Budget Program).[6] A complete list of sources addressed can be found in Table 9.4 of Connecticut's November 18, 2009 SIP submittal. All of the identified BART-eligible EGUs are included in Connecticut's alternative to BART demonstration.

3. Determination of the BART Benchmark

According to the Alternative to BART Rule, in developing the BART benchmark, with one exception, States must follow the approach for making BART determinations under section 51.308(e)(1). The one exception to this general approach is where the alternative program has been designed to meet requirements other than BART; in this case, States are not required to make BART determinations under 51.308(e)(1) and may use a simplifying assumption in establishing a BART benchmark based on an analysis of what BART is likely to be for similar types of sources within a source category. Under either approach to establishing a BART

[5] Visibility Impact is measured in units of deciviews (dv). A deciview measures the incremental visibility change discernable by the human eye. The deciview values included in Table 1 are from Attachment X of Connecticut's November 18, 2009 SIP submittal.

[6] CT RCSA Section 22a–175–22d maintains NO_X emission reductions required by the Clean Air Interstate Rule. Connecticut is subject to ozone-season CAIR limits, however, the State was not included in the final Cross State Air Pollution Rule. See 76 FR 48208 (Aug. 8, 2011). Therefore Connecticut has proposed an intra-state trading program for NO_X to make permanent these emission reductions.

benchmark, we believe that the presumptions for EGUs in the BART Guidelines should be used for comparison to a trading program or other alternative program, unless the State determines that such presumptions are not appropriate for a particular EGU. See 71 FR 60619. Even though Connecticut had the option of using the less stringent EPA presumptive limits, the State opted to use the MANE–VU recommended BART emission limits for non-CAIR EGUs and industrial boilers in setting the BART benchmark. These limits are listed in Table 2.

TABLE 2—MANE–VU RECOMMENDED BART LIMITS

Category	SO_2 Limits	NO_X Limits
Non-CAIR EGUs	Coal—95% control or 0.15 lb/MMbtu Oil—95% control or 0.33 lb/MMBtu (0.3% fuel sulfur limit.	In NO_X SIP call area, extend use of controls to year round 0.1–0.25 lb/MMBtu depending on coal and boiler type.
Industrial Boilers	90% control, or 0.5% fuel sulfur limit (0.55 lb/MMBtu)	0.1–0.4 lb/MMBtu, depending on boiler and fuel type.

4. Connecticut's SO_2 Alternative BART Program

RCSA section 22a–174–19a (Control of Sulfur Dioxide Emissions from Power Plant and Other Large Stationary Sources of Air Pollution) was submitted to EPA as part of Connecticut's November 18, 2008 $PM_{2.5}$ attainment demonstration SIP revision. RCSA Section 22a–174–19a became effective December 28, 2000. It includes a two-tiered timeframe for reducing SO_2 emissions from large EGUs and industrial sources (approximately 59 sources). Starting January 1, 2002, all sources subject to Connecticut's Post 2002–NO_X Budget Program were required to:

- Combust liquid fuel, gaseous fuel or a combination of each, provided that each fuel possesses a fuel sulfur limit of equal to or less than 0.5% sulfur, by weight;
- Meet an average emission rate of equal to or less than 0.55 pounds of SO_2 per MMBtu for each calendar quarter for an affected unit; or
- Meet an average emission rate of equal to or less than 0.5 pounds of SO_2 per MMBtu calculated for each calendar quarter, if such owner or operator averages the emissions from two or more affected units at the premises.

Starting on January 1, 2003, all sources in Connecticut that are Acid Rain Sources under Title IV of the Clean Air Act and are subject to Connecticut's Post-2002 NO_X Budget Program were required to:

- Combust liquid fuel, gaseous fuel or a combination of each, provided that each fuel possesses a fuel sulfur limit of equal to or less than 0.3% sulfur, by weight;
- Meet an average emission rate of equal to or less than 0.33 pounds of SO_2 per MMBtu for each calendar quarter for an affected unit at a premises; or
- Meet an average emission rate of equal to or less than 0.3 pounds of SO_2 per MMBtu calculated from two or more affected units at a premises.

Prior to January 1, 2005, CT DEEP allowed sources subject to the January 1, 2003 emission rates to meet such emission rates by using SO_2 discrete emission reduction credits certified by CT DEEP or EPA's SO_2 Acid Rain Program allowances; also known as emissions credit trading. Connecticut General Statues (CGS) section 22a-198 suspended SO_2 emission credit trading starting January 1, 2005.

The first phase of Connecticut's SO_2 controls plan commenced in January 1, 2002, therefore, CT DEEP selected 2001 as the base year for the alternative to BART demonstration. Likewise, since the second phase of Connecticut's SO_2 plan was fully implemented in 2005, Connecticut chose 2006 for comparison.

TABLE 3—ANNUAL POTENTIAL (ALLOWABLE AT 8760 HOURS) EMISSIONS

[Tons per year]

BART-eligible unit	2001 *	2002 *	2006 *	MANE–VU BART workgroup presumptive BART 2012	EPA presumptive BART 2012
Middletown Unit 3	**5,709	5,709	3,426	3,426	11,419
Middletown Unit 4	**11,284	11,284	6,770	6,770	22,568
Montville Unit 6	22,442	11,221	6,733	6,733	22,442
Norwalk Unit 2	8,557	4,278	2,567	2,567	8,557
PSEG Bridgeport Harbor Unit 3	18,212	9,877	5,926	2,694	***2,694
PSEG New Haven Harbor Unit 1	20,508	10,282	6,169	6,169	20,508
Cascades Boxboard Group PFI Boiler	1,325	662	662	662	1,325
Total	88,037	53,313	32,253	29,021	89,513

* Based on the lower of RCSA section 22a-174–19a regulatory limits or federally enforceable permit conditions.
** Fuel sulfur limited to 0.5% in Consent Order no. 7024.
*** While this level of control is not required by EPA Guidelines, it is recommended that such level of control be considered.

Presumptive BART potential emission levels for 2012 (tons per year) in Table 3 were calculated by multiplying the MANE–VU BART workgroup and EPA recommended BART emission rates in lb/MMBtu by the design capacity of the unit in MMBtu/hr by 8760 hrs/year as follows:

- For Bridgeport Harbor 3, the sole coal-burning unit, 0.15 lb/MMBtu, the MANE–VU BART workgroup's and EPA's recommended SO_2 emission rate for coal-burning units, was used.
- For the five oil-burning EGUs, the MANE–VU BART workgroup's and

EPA's recommended BART emission rates of 0.33 lb/MMBtu and 1.1 lb/MMBtu respectively, were used in the calculations.

• MANE–VU BART workgroup post-BART SO_2 potential emissions for Cascades Boxboard Group were assumed not to change after 2002 because the source became subject to RCSA section 22a 174–19a in 2002 (0.55 lb/MMBtu) and the allowable SO_2 limit did not change after that date so the 2006 potential emissions remain the same.

Table 4 lists the actual 2001, 2002, and 2006 SO_2 emissions from the Connecticut BART-eligible units. It should be noted that, for the most part, the actual emissions are well below the potential emission limits.

TABLE 4—ACTUAL ANNUAL SO_2 EMISSIONS

[Tons per year]

BART-eligible Unit	2001	2002	2006
Middletown Unit 3	1,830	269	124
Middletown Unit 4	1,015	308	123
Montville Unit 6	2,182	794	217
Norwalk Unit 2	1,701	322	374
PSEG Bridgeport Harbor Unit 3	10,429	4,024	2,808
PSEG New Haven Harbor Unit 1	9,543	4,010	689
Cascades Boxboard Group PFI Boiler	251	0.5	215
Total	26,951	9,727	4,550

As detailed in Attachment X of Connecticut's SIP submittal, potential emissions from all sources subject to RCSA 22a–174–19a was 89,537 tons in 2002 and 60,304 tons in 2006. As shown in Table 5, by comparing SO_2 potential emission reductions since 2002 from all Post-2002 NO_X Budget Program sources subject to RCSA section 22a–174–19a (89,537 tons minus 60,304 tons equals 29,233 tons) with SO_2 potential post-BART emission reductions from BART-eligible sources since 2002 (53,313 tons minus 29,021 tons equals 24,292), it is apparent that Connecticut's existing SO_2 regulatory requirements achieve approximately 4,841 tons of greater reductions than estimated reductions from BART alone.

TABLE 5—COMPARISON OF SO_2 POTENTIAL EMISSIONS AND REDUCTIONS SINCE 2002 FROM ALL POST-2002 NO_X BUDGET PROGRAM SOURCES VS. BART-ELIGIBLE SOURCES ALONE

[Tons per year]

Option	2002	2006	Reduction in potential emissions
SO_2 potential emissions from all Post-2002 NO_X Budget Program sources	89,537	60,304	29,233
SO_2 potential emissions from BART-eligible sources alone	53,313	29,021	24,292
Additional reductions beyond BART-eligible sources alone	.....	.....	4,841

In addition, Table 6 shows the reductions in actual SO_2 emissions from all Post-2002 NO_X Budget Program sources and all BART-eligible sources since 2001. Note the significant reduction in actual SO_2 emissions starting in 2002 (effective year of Tier 1 of RCSA section 22a–174–19a) and continuing in 2006 (Tier 2 of RCSA section 22a–174–19a was effective in 2003).

Furthermore, Attachment X of Connecticut's November 18, 2009 Regional Haze SIP submittal contains maps of the facility reductions in actual SO_2 emissions since 2001 from all Post-2002 NO_X Budget Program sources as well as all BART-eligible sources (both Connecticut-specific and as related to Class I areas). These graphics demonstrate that the emission reductions resulting from RCSA section 22a–174–19a are geographically comparable to the locations of the BART-eligible sources.

TABLE 6—COMPARISON OF SO_2 ACTUAL EMISSION REDUCTIONS SINCE 2001 FROM ALL POST-2002 NO_X BUDGET PROGRAM SOURCES VS. BART-ELIGIBLE SOURCES ALONE

[Tons per year]

Option	2001	2002	2006	Reduction in actual emissions since 2001
SO_2 actual emissions from all Post-2002 NO_X Budget Program sources	35,625	13,056	7,146	28,479
SO_2 actual emissions from BART-eligible sources alone	26,951	9,727	4,549	22,402
Additional reductions beyond BART-eligible sources alone	.....	.....	.....	6,077

5. Connecticut's NO_X Alternative BART Program

Most of the BART-eligible units in Connecticut installed NO_X reduction technology during the early to mid 1990s in response to Connecticut's ozone reduction strategies, whereby lower NO_X emission limits were promulgated. As described below, CT DEEP has concluded that the NO_X emission limits contained in the existing regulations are at least as stringent as BART. The CT DEEP alternative NO_X program is comprised of ozone season emission limits and non-ozone season emission limits.

Pursuant to the ozone reasonably available control technology (RACT) provisions of the 1990 Clean Air Act Amendments, in 1995, CT DEEP adopted NO_X control regulations (RCSA section 22a–174–22) achieving substantial reductions in 24-hour NO_X emission rates from a variety of sources, including the BART-eligible units. The maximum allowable 24-hour NO_X emission rate for cyclone furnaces (including Middletown Unit 3) was reduced by 52%, the maximum allowable 24-hour NO_X emission rate for existing coal-fired boilers (Bridgeport Unit 3) was reduced by 58%, and the maximum allowable 24-hour NO_X emission rate for No. 6 oil-fired boilers (including Middletown Unit 4, Montville Unit 6, Norwalk Unit 2, New Haven Harbor Unit 1 and Cascades Boxboard's PFI boiler) was reduced by 17% when compared to previously adopted NO_X limits. This regulation was approved into the Connecticut SIP on October 6, 1997. See 62 FR 52016.

Since 1999, CT DEEP has adopted several NO_X budget trading programs which progressively reduced allowances allocated to Connecticut's NO_X Budget Program sources (i.e., EGUs 15 MW and greater and certain large industrial sources) during the summer ozone season. RCSA section 22a–174–22a limited the summer NO_X emissions budget to 5,866 tons beginning in 1999 and RCSA section 22a–174–22b reduced the summer NO_X budget further to 4,466 tons beginning in 2003. All of Connecticut's BART-eligible units are currently subject to the Post-2002 NO_X Budget Program and are also included in the CAIR NO_X Ozone Season Trading Program starting in 2009 pursuant to RCSA section 22a–174–22c. The CAIR NO_X Ozone Season Trading Program includes a NO_X budget for Connecticut sources of 2,691 tons that is not to be exceeded during the ozone season (May 1st through September 30th each year). Implementation of the CAIR Program will result in a 76% reduction from the estimated 11,203 tons of ozone season NO_X emissions from NO_X Budget Program sources in 1990. Each of these sections (i.e., RCSA section 22a–174–22a, RCSA section 22a–174–22b, and RCSA section 22a–174–22c) were previously approved into the Connecticut SIP.[7]

On December 23, 2008, CAIR was remanded without vacatur.[8] On July 6, 2011, EPA promulgated the Cross State Air Pollution Rule (CSAPR) as a replacement to the remanded CAIR Rule. See 76 FR 48208 (Aug. 8, 2011). Connecticut was not included in the final CSAPR. On December 15, 2011, CT DEEP held a public hearing on proposed 22a–174–22d as a replacement to the remanded CAIR ozone season program for Connecticut (i.e., RCSA section 22a–174–22c). On February 24, 2012, CT DEEP submitted a request for parallel processing of this regulation. Under this procedure, EPA prepared this action before the State's final adoption of 22a–174–22d. Connecticut has indicated that they plan to have a final adopted regulation by June 2012, prior to our final action on its Regional Haze SIP. EPA will review the finalized version of 22a–174–22d to determine whether it differs from the proposed regulation. If the final regulation does differ from the proposed regulation, EPA will determine whether these differences are significant. Ordinarily, changes that are limited to issues such as allocation methodology would not be deemed significant for SIP approval purposes, assuming the methodology does not lead to allocations in excess of the total state budget. Based on EPA's determination regarding the significance of any changes in the final regulation, EPA would then decide whether it is appropriate to prepare a final rule and describe the changes in the final rulemaking action, re-propose action based on Connecticut's final adopted regulation, or other such action as may be appropriate.

RCSA section 22a–174–22d limits Connecticut's ozone season NO_X budget to 2,691 tons, the same budget as included in the CAIR Ozone Season Trading Program. In addition, RCSA section 22a–174–22d only allows for intra-state trading which will insure that all reductions necessary to meet the ozone season NO_X budget will occur in the state.

In addition to the ozone season requirements for NO_X Budget Program sources (i.e., EGUs 15 MW and greater and large industrial sources), Connecticut adopted subdivision 22a–174–22(e)(3) on October 30, 2000 which requires that, starting in October 2003, NO_X Budget Program sources that are also subject to RCSA section 22a–174–22 meet a non-ozone seasonal NO_X emission rate of 0.15 lb/MMBtu. These revisions to RCSA section 22a–174–22 were submitted to EPA as part of Connecticut's November 18, 2008 $PM_{2.5}$ attainment demonstration SIP revision.[9] Therefore, all of Connecticut's NO_X Budget Program sources, including all of Connecticut's BART-eligible sources, are subject to year-round NO_X emission restrictions. Pursuant to RCSA section 22a–174–22, CT DEEP allows sources subject to the 24-hour and non-ozone season NO_X emission limits to use NO_X discrete emission reduction credits or NO_X Budget Program allowances to comply with the subject emission limits. Table 7 shows the NO_X reductions in potential emissions between 2002 and 2006 from all Post-2002 NO_X Budget Program sources as compared with the reduction in NO_X potential emissions from BART-eligible sources alone. The ''low end'' and ''high end'' numbers referenced in the 2006 column in Table 7 are based on the MANE–VU BART workgroup's recommended emission limit range of 0.1 lb/MMBtu (low end) to 0.25 lb/MMBtu (high end) for Non-CAIR EGUs and 0.1 lb/MMBtu (low end) to 0.4 lb/MMBtu (high end) for industrial boilers, depending on coal and boiler type.

[7] RCSA section 22a–174–22a was approved by EPA on September 28, 1999. See 64 FR 52233. RCSA section 22a–174–22b was approved by EPA on December 27, 2000. See 65 FR 81743. With the finalization of Connecticut's CAIR rule (RSCA section 22a–174–22c), Connecticut repealed both RCSA section 22a–174–22a (effective September 4, 2007) and 22a–174–22b (effective May 1, 2010). RCSA section 22a–174–22c was approved by EPA on January 24, 2008. See 73 FR 4105.

[8] *www.epa.gov/airmarkets/progsregs/cair/docs/CAIRRemandOrder.pdf.*

[9] On March 12, 2012, CT DEEP submitted a letter to EPA clarifying that the Appendix to the November 18, 2008 Fine Particulate Matter ($PM_{2.5}$) Attainment Demonstration should have included the regulatory text of RCSA section 22a–174–22(e)(3). All of the documentation necessary to satisfy the public participation requirements of 40 CFR 51 was included in the Appendix.

TABLE 7—COMPARISON OF NO_X POTENTIAL EMISSIONS AND REDUCTIONS SINCE 2002 FROM ALL POST-2002 NO_X BUDGET PROGRAM SOURCES VS. BART-ELIGIBLE SOURCES ALONE

[Tons per year]

Option	2002	2006	Reduction in potential emissions
NO_X potential emissions from all Post-2002 NO_X Budget Program sources	46,188	34,833	11,355.
NO_X potential emissions from BART-eligible sources alone	27,554	High End—24,434	High End—3,120.
		Low End—9,701	Low End—17,853.

Connecticut noted that between 1994 and 2006 NO_X potential emissions from all Post-2002 NO_X Budget Program sources were reduced from 89,812 tons to 34,833 tons (a difference of 54,979 tons), whereas application of BART alone would have resulted in reductions between 19,225 tons (high end) and 33,958 tons (low end).

Connecticut cites three elements of its BART alternative program to support a finding that the clear weight of evidence demonstrates that its NO_X BART alternative program achieves better than BART reductions:

—Under RCSA section 22a–174–22 sources that create trading credits must automatically retire 10% of those credits and sources using credits are required to retire 5% more than the need to meet emission obligations.

—Connecticut's budget under CAIR is a conservative allocation of emissions. After the initial budget determination, another source was added to the universe of sources subject to CAIR without increasing the budget. In addition, the CAIR budget was based on an outdated NO_X SIP Call budget that did not incorporate changes due to a memorandum of understanding between Connecticut, Rhode Island, and Massachusetts.

—Under its CAIR program, Connecticut changed the methodology for allocating allowances such that it is based on megawatt output instead of heat input. Thus, less efficient EGUs receive substantially fewer allowances than they received under Connecticut's earlier NO_X Budget Programs, thereby encouraging further NO_X reducing measures such as controls and/or repowering. That same allocation methodology is also included in proposed RCSA section 22a–174–22d.

While CAIR is currently still in place, it is only effective pending review of CSAPR. However, Connecticut has proposed parallel processing of its replacement to CAIR, RCSA section 22a–174–22d. This regulation as proposed maintains a cap of 2,691 tons per ozone season and allocates emissions credits to EGUs based in part on their megawatt generation.

Furthermore, Attachment X of Connecticut's November 18, 2009 Regional Haze SIP submittal contains maps of the facility reductions in actual NO_X emissions since 1994 from all Post-2002 NO_X Budget Program sources as well as all BART-eligible sources (both Connecticut-specific and as related to Class I areas). These graphics demonstrate that the emission reductions resulting from RCSA Section 22a–174–22 including subdivision 22a–174–22(e)(3) and proposed RCSA section 22a–174–22d (the replacement for RCSA section 22a–174–22c) are geographically comparable to the locations of the BART-eligible sources.

6. EPA's Assessment of Connecticut's Alternative to BART Program Demonstration

EPA is proposing to find that Connecticut has adequately demonstrated that the potential and actual SO_2 emission reductions from RCSA section 22a–174–19a provide greater emission reductions than the presumptive BART level. Connecticut has shown via Attachment X of the November 18, 2009 Regional Haze SIP submittal that for both SO_2 and NO_X emissions, the geographic area covered by the Post-2002 NO_X Budget Program sources is comparable to the geographic area covered by the BART-eligible units, therefore visibility modeling is not required, as noted in the Alternative to BART Rule. See 71 FR 60612. Therefore, EPA is proposing to find that the SO_2 alternative to BART program demonstration meets the requirements of our Alternative to BART Rule.

As part the NO_X alternative to BART program demonstration, Connecticut has presented a weight of evidence demonstration. EPA approved of the weight of evidence approach Connecticut has taken in our Alternative to BART Rule. See 71 FR 60621–22 (Oct. 13, 2006). This approach was intended to provide flexibility for States who wished to pursue alternatives to BART but had difficulty directly showing that their alternative program would necessarily result in greater reasonable progress than the application of BART alone. Under the theoretical scenario where Connecticut would require the most stringent of the MANE–VU recommended controls for each and every one of its BART-eligible sources, it may be difficult or time consuming and expensive for Connecticut to show that its alternative program is at least as stringent as BART alone. However, we note that this scenario is not realistic for several reasons. First, unlike many BART-eligible sources, Connecticut's BART-eligible sources have installed a variety of control equipment in order to meet Connecticut's NO_X Budget Program. As Connecticut noted, since 1994, Connecticut's NO_X programs have resulted in over 55,000 tons per year of reductions from Post-2002 NO_X Budget Program sources, well in excess of what application of BART alone would achieve. Moreover, Connecticut has demonstrated that the NO_X emissions from the BART-eligible sources have a minimal impact on nearby Class I areas. As summarized in Table 8, the greatest impact that any BART-eligible source has on any Class I area due to NO_X emissions in 2002 is PSEG Bridgeport Unit 3 with an impact of only 0.31 dv.

TABLE 8—HIGHEST VISIBILITY IMPACT AT ANY CLASS I AREA DUE TO NO_X FROM EACH BART-ELIGIBLE SOURCE IN CONNECTICUT

Facility	Highest deciview impact [10]
Middletown Unit 3	0.06
Middletown Unit 4	0.03
Montville Unit 6	0.04
Norwalk Unit 2	0.01
PSEG Bridgeport Harbor Unit 3	0.31
PSEG New Haven Harbor Unit 1	0.14
Cascade Boxboard Group PFI Boiler	0.03

HadConnecticut conducted a source-by-source BART analysis, the current

[10] The deciview impact of each BART-eligible source, by pollutant, can be found in Attachment X of Connecticut's November 18, 2009 SIP submittal.

controls and the minimal impact from the BART-eligible sources would have been among the individualized factors that Connecticut would have considered. Based on these factors, we do not believe that the most stringent level of controls would have necessarily been appropriate for Connecticut's BART-eligible sources, and therefore do not believe that the low end emission rates from the MANE–VU recommended BART limit reflect a realistic BART baseline.

An additional piece of evidence for Connecticut's alternative to BART program demonstration is that, while Connecticut does not have a firm state-wide, year-round cap on emissions from EGUs, the firm cap during ozone season acts as an impediment to emissions growth during non-ozone season.

In EPA's Alternative to BART Rule, the included scenario was only intended to be demonstrative of those situations where a weight of evidence approach would be appropriate. Connecticut's NO_X alternative to BART program demonstration fits comfortably within the intent behind the weight of evidence approach. Given the extent of evidence—the controls already required prior to the baseline year, the minimal visibility impact of the BART-eligible sources, and the impediment of NO_X emission growth from new EGUs—we are proposing to find that Connecticut has shown by a clear weight of evidence that their NO_X BART alternative which relies on RCSA Section 22a–174–22 including subdivision 22a–174–22(e)(3), and RCSA section 22a–174–22d meets the requirements of our BART alternative rule.

7. Connecticut's PM BART Determinations

EPA's BART Guidelines for 750 MW and greater power plants do not contain presumptive emission limits for PM. The MANE–VU BART workgroup's recommended BART emission limits for $PM_{2.5}$ (measured as particles less than 2.5 microns in diameter, or $PM_{2.5}$) are emission rate ranges of 0.02–0.04 lb/MMBtu for non-CAIR EGUs and 0.02–0.07 lb/MMBtu for industrial boilers.

Existing Controls at Sources

Table 9 shows the visibility impact and existing PM controls at BART-eligible units in Connecticut. Several units have electrostatic precipitators (ESP) already in place.

TABLE 9—THE VISIBILITY IMPACT AND EXISTING CONTROLS AT THE BART-ELIGIBLE UNITS

BART-eligible Unit	Highest PM_{10} impact on 20% best days (deciview)	Existing PM controls
Middletown Unit 3	0.0000	ESP
Middletown Unit 4	0.0025	None
Montville Unit 6	0.0005	None
Norwalk Unit 2	0.0002	ESP
PSEG Bridgeport Harbor Unit 3	0.0035	ESP, Baghouse
PSEG New Haven Harbor Unit 1	0.0012	ESP
Cascades Boxboard Group PFI Boiler	0.0004	None

Middletown Unit 3, Norwalk Unit 2, PSEG Bridgeport Harbor Unit 3, and PSEG New Haven Harbor Unit 1 have existing ESP control. PSEG Bridgeport Harbor Unit 3 also installed a baghouse for mercury control in July 2008, thereby achieving concomitant PM reduction benefits.

Visibility Improvement Reasonably Expected From Application of Controls

MANE–VU's 2002 individual unit modeling shows that none of Connecticut's PM emissions from BART-eligible sources have a significant visibility impact on any Class I area. As can be seen in Table 9, the highest individual PM visibility impact (0.0035 dv) is significantly less than the 0.1 deciview individual impact MANE–VU warrants worthy of consideration of BART controls.[11]

Cost of Controls

Table 10 shows the cost of PM controls per year for those BART-eligible units without PM controls as well as actual PM emissions for 2005. Numbers were calculated by using the range of control technologies and cost per actual cubic feet per minute (ACFM) of gas flow values provided in NESCAUM's *Assessment of Control Technology Options for BART-Eligible Sources*[12] and ACFM values provided in the 2005 emission statement.

TABLE 10—COST OF PM CONTROLS AND 2005 ACTUAL EMISSIONS

BART-eligible unit	Capital cost ranges ($)	Fixed & Variable operation and maintenance cost ranges ($/year)	2005 Actual PM emissions (tons)
Middletown Unit 4	$20,496,000–68,320,000	$683,200–3,416,000	46
Montville Unit 6	20,220,000–67,400,000	674,000–3,370,000	18
Cascades Boxboard Group PFI Boiler	120,000–4,800,000	48,000–324,000	42

[11] See Section 4.1 of the MANE–VU Five Factor Analysis of BART-Eligible Sources, Attachment W of Connecticut's November 18, 2009 SIP submittal.

[12] See Attachment Z of the Connecticut November 18, 2009 SIP submittal.

Remaining Useful Life of the Source

The MANE–VU BART workgroup's recommendation for sources which rely on the remaining useful life factor for the determination of BART is that these sources should either control emissions from the BART-eligible sources prior to 2013 or accept a federally enforceable permit limitation or retirement date prior to each state's public notice and hearing processes and FLM review of BART SIP elements. Similar to the other New England States, the Connecticut analysis did not weight this factor.

Energy and Non-Air Quality Environmental Impacts

No significant energy or non-air quality environmental benefits or disbenefits associated with PM controls were identified.

Connecticut's Determination

Given the very high cost per ton reduced for the remaining BART-eligible units without PM controls along with the lack of PM contribution evidence from MANE–VU's modeling, Connecticut determined that the existing conditions with respect to PM control are equivalent to BART.

EPA's Assessment

EPA is proposing to approve Connecticut's determination that further primary PM control beyond the controls already implemented by Connecticut's BART-eligible units is not warranted at this time as such measures are not cost-effective and the visibility contribution from Connecticut's BART-eligible units with respect to PM is insignificant.

8. BART Enforceability

EPA is proposing to approve RCSA Section 22a–174–19a and revisions to RCSA Section 22a–174–22, including new subdivision 22a–174–22(e)(3), with this rulemaking. In addition, pursuant to CT DEEP's request for parallel processing, EPA is proposing approval of Connecticut's proposed RCSA Section 22a–174–22d. After the State submits the adopted State Regulation RCSA 22a–174–22d (including a response to all public comments raised during the State's public participation process), EPA will prepare a final rulemaking notice. If the State's formal SIP submittal contains changes which occur after EPA's notice of proposed rulemaking, such changes must be described in EPA's final rulemaking action. If the State's changes are significant, then EPA must decide whether it is appropriate to re-propose our action with regard to the State's SIP submittal.

C. Long-Term Strategy

As described in Section II.E of this action, the LTS is a compilation of State-specific control measures relied on by the State to obtain its share of emission reductions to support the RPGs established by Maine, New Hampshire, Vermont, and New Jersey, the nearby Class I area States. Connecticut's LTS for the first implementation period addresses the emissions reductions from federal, State, and local controls that take effect in the State from the baseline period starting in 2002 until 2018. Connecticut participated in the MANE–VU regional strategy development process and supported a regional approach towards deciding which control measures to pursue for regional haze, which was based on technical analyses documented in the following reports: (a) The Contribution Report; (b) *Assessment of Reasonable Progress for Regional Haze in MANE–VU Class I Areas* (available at *www.marama.org/visibility/RPG/FinalReport/RPGFinalReport_070907.pdf*); (c) *Five-Factor Analysis of BART-Eligible Sources: Survey of Options for Conducting BART Determinations* (available at *www.nescaum.org/documents/bart-final-memo-06-28-07.pdf*); and (d) *Assessment of Control Technology Options for BART–Eligible Sources: Steam Electric Boilers, Industrial Boilers, Cement Plants and Paper, and Pulp Facilities* (available at *www.nescaum.org/documents/bart-control-assessment.pdf*).

1. Emissions Inventory for 2018 With Federal and State Control Requirements

The State-wide emissions inventories used by MANE–VU in its regional haze technical analyses were developed by MARAMA for MANE–VU with assistance from Connecticut. The 2018 emissions inventory was developed by projecting 2002 emissions forward based on assumptions regarding emissions growth due to projected increases in economic activity and emissions reductions expected from federal and State regulations. MANE–VU's emissions inventories included estimates of NO_X, coarse particulate matter (PM_{10}), $PM_{2.5}$, and SO_2, VOC, and NH_3. The BART guidelines direct States to exercise judgment in deciding whether VOC and NH_3 impair visibility in their Class I area(s). As discussed further in Section III.C.3 below, MANE–VU demonstrated that anthropogenic emissions of sulfates are the major contributor to $PM_{2.5}$ mass and visibility impairment at Class I areas in the Northeast and Mid-Atlantic region. It was also determined that the total ammonia emissions in the MANE–VU region are extremely small.

MANE–VU developed emissions inventories for four inventory source classifications: (1) Stationary point sources, (2) stationary area sources, (3) non-road mobile sources, and (4) on-road mobile sources. The New York Department of Environmental Conservation also developed an inventory of biogenic emissions for the entire MANE–VU region. Stationary point sources are those sources that emit greater than a specified tonnage per year, depending on the pollutant, with data provided at the facility level. Stationary area sources are those sources whose individual emissions are relatively small, but due to the large number of these sources, the collective emissions from the source category could be significant. Non-road mobile sources are equipment that can move but do not use the roadways. On-road mobile source emissions are automobiles, trucks, and motorcycles that use the roadway system. The emissions from these sources are estimated by vehicle type and road type. Biogenic sources are natural sources like trees, crops, grasses, and natural decay of plants. Stationary point sources emission data is tracked at the facility level. For all other source types, emissions are summed on the county level.

There are many federal and State control programs being implemented that MANE–VU and Connecticut anticipate will reduce emissions between the baseline period and 2018. Emission reductions from these control programs in the MANE–VU region were projected to achieve substantial visibility improvement by 2018 at all of the MANE–VU Class I areas. To assess emissions reductions from ongoing air pollution control programs, BART, and reasonable progress goals, MANE–VU developed 2018 emissions projections called ''Best and Final.'' The emissions inventory provided by the State of Connecticut for the Best and Final 2018 projections is based on expected control requirements.

Connecticut relied on emission reductions from the following ongoing and expected air pollution control programs as part of the State's long term strategy. For electrical generating units (EGUs), Connecticut relied on RCSA sections 22a–174–19a which limits SO_2 emissions from all EGUs, proposed RCSA section 22a–174–22d which limits ozone season NO_X for all EGUs, RCSA section 22a–174–22 which limits the non-ozone season NO_X emissions for all EGUs, and Connecticut General

Statues, section 22a–199 which limits mercury emissions for all coal-fired EGUs. Connecticut also relied on the following controls on non-EGU point sources in estimating 2018 emissions inventories: NO_X SIP Call Phases I and II; NO_X Reasonably Available Control Technology (RACT) in 1-hour Ozone SIP; NO_X Ozone Transport Commission (OTC) 2001 Model Rule for Industrial, Commercial, and Institutional (ICI) Boilers; VOC 2-year, 4-year, 7-year and 10-year Maximum Achievable Control Technology (MACT) Standards; Combustion Turbine and Reciprocating Internal Combustion Engine (RICE) MACT; and Industrial Boiler/Process Heater MACT (also known as the Industrial Boiler MACT).

On July 30, 2007, the U.S. Court of Appeals for the District of Columbia vacated and remanded the Industrial Boiler MACT Rule. *NRDC* v. *EPA,* 489F.3d 1250 (DC Cir. 2007). This MACT was vacated since it was directly affected by the vacatur and remand of the Commercial and Industrial Solid Waste Incinerator (CISWI) definition rule. EPA proposed a new Industrial Boiler MACT rule to address the vacatur on June 4, 2010 (75 FR 32006) and issued a final rule on March 21, 2011 (76 FR 15608). On May 18, 2011, EPA stayed the effective date of the Industrial Boiler MACT pending review by the DC Circuit or the completion of EPA's reconsideration of the rule. See 76 FR 28662.

On December 2, 2011, EPA issued a proposed reconsideration of the MACT standards for existing and new boilers at major (76 FR 80598) and area (76 FR 80532) source facilities, and for Commercial and Industrial Solid Waste Incinerators (76 FR 80452). On January 9, 2012, the U.S. District Court for the District of Columbia vacated EPA's stay of the effectiveness date of the Industrial Boiler MACT, reinstating the original effective date and therefore requiring compliance with the current rule in 2014. *Sierra Club* v. *Jackson,* Civ. No. 11–1278, slip op. (D.D.C. Jan. 9, 2012).

Even though Connecticut's modeling is based on the old Industrial Boiler MACT limits, Connecticut's modeling conclusions are unlikely to be affected because the expected reductions in SO_2 and PM resulting from the vacated MACT rule are a relatively small component of the Connecticut inventory and the expected emission reductions from the final MACT rule are comparable to those modeled. In addition, the new MACT rule requires compliance by 2014 and therefore the expected emission reductions will be achieved prior to the end of the first implementation period in 2018. Thus, EPA does not expect that differences between the old and revised Industrial Boiler MACT emission limits would affect the adequacy of the existing Connecticut regional haze SIP. If there is a need to address discrepancies between projected emissions reductions from the old Industrial Boiler MACT and the Industrial Boiler MACT finalized in March 2011, we expect Connecticut to do so in its 5-year progress report.

Controls on area sources expected by 2018 include: the OTC VOC rules for consumer products (RCSA 22a–174–40); VOC control measures for architectural and industrial maintenance coatings (RCSA 22a–174–41) and solvent cleaning (RCSA 22a–174–20(l)); VOC control measures for adhesive and sealants (RCSA 22a–174–44); VOC control measures for emulsified and cutback asphalt paving (RCSA 22a–174–20(k)); and VOC control measures for portable fuel containers (contained in EPA's Mobile Source Air Toxics rule).

Controls on mobile sources expected by 2018 include: On-board diagnostics testing for 1979 and new vehicles (RCSA 22a–174–27); Federal On-Board Refueling Vapor Recovery (ORVR) Rule; Federal Tier 2 Motor Vehicle Emissions Standards and Gasoline Sulfur Requirements; Federal Heavy-Duty Diesel Engine Emission Standards for Trucks and Buses; and Federal Emission Standards for Large Industrial Spark-Ignition Engines and Recreation Vehicles.

Controls on non-road sources expected by 2018 include the following federal regulations: Control of Air Pollution: Determination of Significance for Nonroad Sources and Emission Standards for New Nonroad Compression Ignition Engines at or above 37 kilowatts (59 FR 31306, June 17, 1994); Control of Emissions of Air Pollution from Nonroad Diesel Engines (63 FR 56967, Oct. 23, 1998); Control of Emissions from Nonroad Large Spark-Ignition Engines and Recreational Engines (67 FR 68241, Nov. 8, 2002); and Control of Emissions of Air Pollution from Nonroad Diesel Engines and Fuels (69 FR 38958, June 29, 2004).

Tables 11 and 12 are summaries of the 2002 baseline and 2018 estimated emissions inventories for Connecticut. The 2018 estimated emissions include emissions growth as well as emission reductions due to ongoing emission control strategies and reasonable progress goals.

TABLE 11—2002 EMISSIONS INVENTORY SUMMARY FOR CONNECTICUT

[Tons per year]

Category	VOC	NO_X	$PM_{2.5}$	PM_{10}	NH_3	SO_2
EGU Point	303	6,150	461	627	.....	13,550
Non-EGU Point	4,604	6,773	822	990	.....	2,438
Area	87,302	12,689	14,247	48,281	5,318	12,418
On-Road Mobile	31,755	68,816	1,042	1,580	3,294	1,667
Non-Road Mobile	33,880	25,460	1,794	1,952	16.6	2,087
Biogenics	64,017	560	.....	.....	.....	.....
Total	221,861	120,448	18,366	53,430	8,629	32,160

TABLE 12—2018 EMISSIONS INVENTORY SUMMARY FOR CONNECTICUT

[Tons per year]

Category	VOC	NO_X	$PM_{2.5}$	PM_{10}	NH_3	SO_2
EGU Point	145	3,418	927	959	341	6,697
Non-EGU Point	4,227	7,501	937	1,104	.....	2,068
Area	68,395	11,795	9,635	20,511	5,061	534
On-Road Mobile	10,768	14,787	500	567	3,872	366
Non-Road Mobile	20,694	16,233	1,135	1,236	20	815

TABLE 12—2018 EMISSIONS INVENTORY SUMMARY FOR CONNECTICUT—Continued

[Tons per year]

Category	VOC	NO_X	$PM_{2.5}$	PM_{10}	NH_3	SO_2
Biogenics	64,017	560	.....	.....	.....	.....
Total	168,246	54,294	13,134	24,377	9,294	10,480

2. Modeling To Support the LTS and Determine Visibility Improvement for Uniform Rate of Progress

MANE–VU performed modeling for the regional haze LTS for the 11 Mid-Atlantic and Northeast States and the District of Columbia. The modeling analysis is a complex technical evaluation that began with selection of the modeling system. MANE–VU used the following modeling system:

- *Meteorological Model:* The Fifth-Generation Pennsylvania State University/National Center for Atmospheric Research (NCAR) Mesoscale Meteorological Model (MM5) version 3.6 is a nonhydrostatic, prognostic meteorological model routinely used for urban- and regional-scale photochemical, $PM_{2.5}$, and regional haze regulatory modeling studies.
- *Emissions Model:* The Sparse Matrix Operator Kernel Emissions (SMOKE) version 2.1 modeling system is an emissions modeling system that generates hourly gridded speciated emission inputs of mobile, non-road mobile, area, point, fire, and biogenic emission sources for photochemical grid models.
- *Air Quality Model:* The EPA's Models-3/Community Multiscale Air Quality (CMAQ) version 4.5.1 is a photochemical grid model capable of addressing ozone, PM, visibility and acid deposition at a regional scale.
- *Air Quality Model:* The Regional Model for Aerosols and Deposition (REMSAD), is a Eulerian grid model that was primarily used to determine the attribution of sulfate species in the Eastern US via the species-tagging scheme.
- *Air Quality Model:* The California Puff Model (CALPUFF), version 5 is a non-steady-state Lagrangian puff model used to access the contribution of individual States' emissions to sulfate levels at selected Class I receptor sites.

CMAQ modeling of regional haze in the MANE–VU region for 2002 and 2018 was carried out on a grid of 12x12 kilometer (km) cells that covers the 11 MANE–VU States (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont) and the District of Columbia and States adjacent to them. This grid is nested within a larger national CMAQ modeling grid of 36x36 km grid cells that covers the continental United States, portions of Canada and Mexico, and portions of the Atlantic and Pacific Oceans along the east and west coasts. Selection of a representative period of meteorology is crucial for evaluating baseline air quality conditions and projecting future changes in air quality due to changes in emissions of visibility-impairing pollutants. MANE–VU conducted an in-depth analysis which resulted in the selection of the entire year of 2002 (January 1–December 31) as the best period of meteorology available for conducting the CMAQ modeling. The MANE–VU States' modeling was developed consistent with EPA's *Guidance on the Use of Models and Other Analyses for Demonstrating Attainment of Air Quality Goals for Ozone, $PM_{2.5}$, and Regional Haze*, April 2007 (EPA–454/B–07–002, available at *www.epa.gov/scram001/guidance/guide/final-03-pm-rh-guidance.pdf*), and EPA document, *Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations,* August 2005 and updated November 2005 (EPA–454/R–05–001, available at *www.epa.gov/ttnchie1/eidocs/eiguid/index.html*) (hereinafter referred to as ''EPA's Modeling Guidance'').

MANE–VU examined the model performance of the regional modeling for the areas of interest before determining whether the CMAQ model results were suitable for use in the regional haze assessment of the LTS and for use in the modeling assessment. The modeling assessment predicts future levels of emissions and visibility impairment used to support the LTS and to compare predicted, modeled visibility levels with those on the uniform rate of progress. In keeping with the objective of the CMAQ modeling platform, the air quality model performance was evaluated using graphical and statistical assessments based on measured ozone, fine particles, and acid deposition from various monitoring networks and databases for the 2002 base year. MANE–VU used a diverse set of statistical parameters from the EPA's Modeling Guidance to stress and examine the model and modeling inputs. Once MANE–VU determined the model performance to be acceptable, MANE–VU used the model to assess the 2018 RPGs using the current and future year air quality modeling predictions, and compared the RPGs to the uniform rate of progress.

In accordance with 40 CFR 51.308(d)(3), the State of Connecticut provided the appropriate supporting documentation for all required analyses used to determine the State's LTS. The technical analyses and modeling used to develop the glide path and to support the LTS are consistent with EPA's RHR, and interim and final EPA Modeling Guidance. EPA is proposing to find the MANE–VU technical modeling to support the LTS and determine visibility improvement for the uniform rate of progress acceptable because the modeling system was chosen and used according to EPA Modeling Guidance. EPA agrees with the MANE–VU model performance procedures and results, and that CMAQ, REMSAD, and CALPUFF are appropriate tools for the regional haze assessments for the Connecticut LTS and regional haze SIP.

3. Relative Contributions of Pollutants to Visibility Impairment

An important step toward identifying reasonable progress measures is to identify the key pollutants contributing to visibility impairment at each Class I area. To understand the relative benefit of further reducing emissions from different pollutants, MANE–VU developed emission sensitivity model runs using CMAQ to evaluate visibility and air quality impacts from various groups of emissions and pollutant scenarios in the Class I areas on the 20 percent worst visibility days.

Regarding which pollutants are most significantly impacting visibility in the MANE–VU region, MANE–VU's contribution assessment demonstrated that sulfate is the major contributor to $PM_{2.5}$ mass and visibility impairment at Class I areas in the Northeast and Mid-Atlantic Region. Sulfate particles

commonly account for more than 50 percent of particle-related light extinction at northeastern Class I areas on the clearest days and for as much as, or more than, 80 percent on the haziest days. For example, at the Brigantine National Wildlife Refuge Class I area (the MANE–VU Class I area with the greatest visibility impairment), on the 20 percent worst visibility days in 2000—2004, sulfate accounted for 66 percent of the particle extinction. After sulfate, organic carbon (OC) consistently accounts for the next largest fraction of light extinction. Organic carbon accounted for 13 percent of light extinction on the 20 percent worst visibility days for Brigantine, followed by nitrate that accounts for 9 percent of light extinction. On the best visibility days, sulfate accounts for 50 percent of the particle related visibility extinction. Organic carbon accounts for the next largest contribution of 40 percent of the visibility impairment on the clearest days. Nitrate, elemental carbon, and fine soil typically contribute less than 10 percent of the visibility impairment mass on the clearest days.

The emissions sensitivity analyses conducted by MANE–VU predict that reductions in SO_2 emissions from EGU and non-EGU industrial point sources will result in the greatest improvements in visibility in the Class I areas in the MANE–VU region, more than any other visibility-impairing pollutant. As a result of the dominant role of sulfate in the formation of regional haze in the Northeast and Mid-Atlantic Region, MANE–VU concluded that an effective emissions management approach would rely heavily on broad-based regional SO_2 control efforts in the eastern United States.

4. Reasonable Progress Goal

Since the State of Connecticut does not have a Class I area, it is not required to establish RPGs. However, as a MANE–VU member State, Connecticut adopted the ''Statement of MANE–VU Concerning a Request for a Course of Action by States Within MANE–VU Toward Assuring Reasonable Progress'' on June 7, 2007. This document included four emission management strategies that will provide for reasonable progress towards achieving natural visibility at the MANE–VU Class I areas. These emission management strategies are collectively known as the MANE–VU ''Ask,'' and include: (a) Timely implementation of BART requirements; (b) a 90 percent reduction in SO_2 emissions from each of the EGU stacks identified by MANE–VU comprising a total of 167 stacks;[13] (c) adoption of a low sulfur fuel oil strategy; and (d) continued evaluation of other control measures to reduce SO_2 and NO_X emissions.

Connecticut will be controlling its BART sources with Connecticut's alternative to BART program. This program is discussed in detail in Section III.B. Connecticut does not have any EGU stacks identified by MANE–VU as a top contributor to visibility impairment in any of the MANE–VU Class I areas.

The MANE–VU low sulfur fuel oil strategy includes: Phase I reduction of distillate oil to 0.05% sulfur by weight (500 parts per million (ppm)) by no later than 2014; Phase II reductions of #4 residual oil to 0.25% sulfur by weight by no later than 2018; #6 residual oil to 0.5% sulfur by weight by no later than 2018; and further reduction of the sulfur content of distillate oil to 15 ppm by 2018.

The expected reduction in SO_2 emissions by 2018 from the MANE–VU ''Ask'' will yield corresponding reductions in sulfate aerosol, the main culprit in fine-particle pollution and regional haze. For Connecticut, the MANE–VU analysis demonstrates that the reduction of the sulfur content in fuel oil will lead to an average reduction of 0.13—0.18 ug/m^3 in the 24 hour $PM_{2.5}$ concentration within the State, improving health and local visibility. In addition, the use of low sulfur fuels will result in cost savings to owners/operators of residential furnaces and boilers due to reduced maintenance costs and extended life of the units.

EPA is today proposing approval of the Connecticut Regional Haze SIP for the first implementation period without Connecticut's implementation of a low sulfur fuel oil strategy.[14] As described in Section III.A of this notice, Connecticut neither causes nor contributes to visibility impairment in the closest Class I areas located in New Jersey, Vermont, New Hampshire, and Maine. For each of these Class I areas, the contribution of Connecticut's emissions to total sulfate is less than the 2% threshold set by the MANE–VU States to determine whether any State contributed to visibility impairment. While the SO_2 reductions being achieved by Connecticut are somewhat less than the statewide reductions that were projected to result from adoption of a low-sulfur fuel oil strategy by 2012, this shortfall is not anticipated to interfere with the ability of other States to meet their respective reasonable progress goals. All emissions from Connecticut contribute no more than 0.76% of total sulfate at any Class I area. In its November 18, 2009 SIP submittal, Connecticut states that it will review the details of its long term strategy in five years, coincident with Connecticut's first regional haze SIP progress report. We encourage adoption of a low-sulfur fuel oil strategy by Connecticut and the surrounding States as such a strategy will have local air quality and some, limited visibility benefits. However, we do not believe it is a necessary component of an approvable Regional Haze SIP for Connecticut for the first implementation period.

Despite our conclusion that a low sulfur fuel oil strategy is not a necessary component of its Regional Haze SIP for this first implementation period, Connecticut has adopted a partial low sulfur fuel oil strategy that is contingent on its neighboring states adopting similar policies. Section 16a–21a of the Connecticut General Statutes (CGS) limits sulfur content of heating distillate oil and off road diesel to 500 ppm as of the date on which the last of the States of New York, Massachusetts, and Rhode Island limit the sulfur content of such fuels. Currently, all three States have yet to adopt these measures. Connecticut has submitted CGS Section16a–21a for approval into its SIP.[15] Actual emission reductions from CGS Section 16a–21a are not certain to occur because the neighboring States may never adopt their counterparts. Therefore, we are not relying upon any potential emissions reductions from CGS Section 16a–21a for the purposes of our approval of this revision to Connecticut's SIP. *See Safe Air for Everyone* v. *EPA,* 475 F.3d 1096, 1108 (9th Cir. 2007). However, the content of a State's implementation plan

[13] See Appendix E—''Top Electrical Generating Unit List'' of the Connecticut SIP submittal for a complete listing of the 167 stacks.

[14] On January 15, 2009, EPA made a finding that, among other States, Connecticut had failed to submit a Regional Haze SIP by the required deadline. 74 FR 2392. We have proposed a consent decree to resolve a deadline suit regarding this finding as well as the finding of failure for 36 other States, the District of Columbia, and the U.S. Virgin Islands. *National Parks Conservation Association* v. *Jackson,* Civ. No. 1:11–cv–1548 (D.D.C. 2011). Because we do not believe a low-sulfur fuel oil strategy is necessary for Connecticut's LTS during this first implementation period, EPA is moving forward with this proposed approval of the State's SIP submittal in order to satisfy our obligations under the Clean Air Act.

[15] Connecticut submitted Sec. 16a–21a as part of the November 18, 2009 Regional Haze SIP submittal. See Attachment GG. Sec. 16a–21a was subsequently amended, effective July 1, 2011, to include additional sulfur in fuel content reductions for number two home heating oil and number two off road diesel to 15 ppm at such time that New York, Massachusetts, and Rhode Island adopt substantially similar provisions. EPA is not proposing action on this amendment in this rulemaking.

is generally left to the discretion of the State so long as it meets the requirements of the Clean Air Act. *See Union Electric* v. *EPA,* 427 U.S. 246 (1976). Therefore, because CGS Section 16a–21a does not weaken or impede implementation of the rest of the SIP, we are also proposing to approve CGS Section 16a–21a.

5. Additional Considerations for the LTS

In 40 CFR 51.308(d)(3)(v), States are required to consider the following factors in developing the long term strategy:

a. Emission reductions due to ongoing air pollution control programs, including measures to address reasonably attributable visibility impairment;

b. Measures to mitigate the impacts of construction activities;

c. Emission limitations and schedules for compliance to achieve the reasonable progress goal;

d. Source retirement and replacement schedules;

e. Smoke management techniques for agricultural and forestry management purposes including plans as currently exist within the State for these purposes;

f. Enforceability of emissions limitations and control measures; and

g. The anticipated net effect on visibility due to projected changes in point area, and mobile source emissions over the period addressed by the long term strategy.

a. Emission Reductions Including RAVI

Since Connecticut does not contain any Class I areas, the State is not required to address RAVI, nor has any Connecticut source been identified as subject to RAVI. A list of Connecticut's ongoing air pollution control programs is included in Section III.B.1.

b. Construction Activities

The Regional Haze Rule requires Connecticut to consider measures to mitigate the impacts of construction activities on regional haze. MANE–VU's consideration of control measures for construction activities is documented in *Technical Support Document on Measures to Mitigate the Visibility Impacts of Construction Activities in the MANE–VU Region*, Draft, October 20, 2006.[16]

The construction industry is already subject to requirements for controlling pollutants that contribute to visibility impairment. For example, federal regulations require the reduction of SO_2 emissions from construction vehicles. At the State level, Connecticut's RCSA 22a–174–18, ''Control of particulate matter and visible emissions,'' addresses the control of airborne particulate matter and fugitive particulate matter in subsections (c) and (d). These regulations, which include dust control measures and visible emissions from diesel powered mobile sources, apply to road building and construction activities.[17]

MANE–VU's Contribution Report found that, from a regional haze perspective, crustal material generally does not play a major role. On the 20 percent best-visibility days during the 2000–2004 baseline period, crustal material accounted for 6 to 11 percent of the particle-related light extinction at the MANE–VU Class I Areas. On the 20 percent worst-visibility days, however, the contribution was reduced to 2 to 3 percent. Furthermore, the crustal fraction is largely made up of pollutants of natural origin (e.g., soil or sea salt) that are not targeted under the Regional Haze Rule. Nevertheless, the crustal fraction at any given location can be heavily influenced by the proximity of construction activities; and construction activities occurring in the immediate vicinity of MANE–VU Class I area could have a noticeable effect on visibility.

For this regional haze SIP, Connecticut concluded that its current regulations are currently sufficient to mitigate the impacts of construction activities. Any future deliberations on potential control measures for construction activities and the possible implementation will be documented in the first regional haze SIP progress report in 2014. EPA proposes to find that Connecticut has adequately addressed measures to mitigate the impacts of construction activities.

c. Emission Limitations and Schedules for Compliance To Achieve the RPG

In addition to the existing CAA control requirements discussed in Section III.C.1, Connecticut has legislation to implement a low sulfur fuel oil strategy consistent with the MANE–VU ''Ask'' at such time that New York, Massachusetts, and Rhode Island adopt a comparable sulfur in fuel oil limit. As described in Section III.C.4 above, we do not believe inclusion of the low sulfur oil strategy is a necessary component of an approvable Regional Haze SIP for Connecticut. Therefore, EPA is proposing to determine that Connecticut has satisfactorily considered emission limitations and schedules as part of the LTS.

d. Source Retirement and Replacement Schedule

Pursuant to 40 CFR 51.308(d)(3)(v)(D) of the Regional Haze Rule, Connecticut is required to consider source retirement and replacement schedules in developing the long term strategy. Source retirement and replacement were considered in developing the 2018 emissions. The sources in Connecticut that were shut down after the 2002 base year and therefore were not included in the 2018 inventory are: Devon Unit 7 (109 MW EGU) and Devon Unit 8 (109 MW EGU). The modeling used to develop the 2018 emission inventories, EPA's Integrated Planning Model (IPM), projected that several large EGUs in Connecticut, including five of the six BART-eligible EGUs would retire by 2018 and be replaced by newer units to meet future electric growth. However, Connecticut did not directly rely on the closures of any particular plant in establishing the 2018 inventory upon which the reasonable progress goals were set. EPA is proposing to determine that Connecticut has satisfactorily considered source retirement and replacement schedules as part of the LTS.

e. Smoke Management Techniques

The Regional Haze Rule requires States to consider smoke management techniques related to agricultural and forestry management in developing the long-term strategy. MANE–VU's analysis of smoke management in the context of regional haze is documented in *Technical Support Document on Agricultural and Smoke Management in the MANE–VU Region*, September 1, 2006, (hereinafter referred to as the ''Smoke TSD'').[18]

Connecticut currently regulates outdoor wood burning through a statute at CGS 22a–174(f) and a regulation at RCSA 22a–174–17. The open burning requirements limit the locations and times when open burning can take place. Although CT DEEP does not have a formal smoke management program (SMP), as a smoke management policy, CT DEEP's Division of Forestry can only initiate prescribed burns when such activity has less significant impacts on air quality.[19] SMPs are required only when smoke impacts from fires managed for resources benefits contribute significantly to regional haze.

[16] This document has been provided as part of the docket to this proposed rulemaking.

[17] The Regulations are available at *www.dep.state.ct.us/air2/regs/mainregs.htm.*

[18] This document has been included as part of the docket to this proposed rulemaking.

[19] See Attachment FF—Connecticut Smoke Management Policy Documentation

The emissions inventory presented in the Smoke TSD indicates that agricultural, managed, prescribed, and open burning emissions are very minor; the inventory estimates that, in Connecticut, those emissions from those source categories totaled 30.8 tons of PM_{10} and $PM_{2.5}$ in 2002, which constitute 0.06% and 0.17% of the total inventory for these pollutants, respectively.

Source apportionment results show that wood smoke is a moderate contributor to visibility impairment at some Class I areas in the MANE–VU region; however, smoke is not a large contributor to haze in MANE–VU Class I areas on either the 20% best or 20% worst visibility days. Moreover, most of wood smoke is attributable to residential wood combustion. Therefore, it is unlikely that fires for agricultural or forestry management cause large impacts on visibility in any of the Class I areas in the MANE–VU region. On rare occasions, smoke from major fires degrades air quality and visibility in the MANE–VU area. However, these fires are generally unwanted wildfires that are not subject to SMPs. EPA proposes to approve Connecticut's decision that an Agricultural and Forestry Smoke Management Plan to address visibility impairment is not required at this time.

f. Enforceability of Emission Limitations and Control Measures

Connecticut has asked, and we are proposing to process approval of RCSA Section 22a–174–22d in parallel with the approval of Connecticut's Regional Haze SIP. Connecticut indicated that they plan to have a final adopted regulation by June 2012, prior to the finalization of this action. EPA will review the final regulation and determine whether it differs significantly from the proposed regulation. At the same time we take final action on Connecticut's Regional Haze SIP, we will then take final action on RCSA 22a–174–22d, at which point it will be federally enforceable. Therefore, once today's action is finalized, all emission limitations included as part of Connecticut's Regional Haze SIP will be federally enforceable. EPA is proposing to find that Connecticut has adequately addressed the enforceability of emission limitations and control measures.

g. The Anticipated Net Effect on Visibility

MANE–VU used the best and final emission inventory to model progress expected toward the goal of natural visibility conditions for the first regional haze planning period. All of the MANE–VU Class I areas are expected to achieve greater progress toward the natural visibility goal than the uniform rate of progress, or the progress expected by extrapolating a trend line from current visibility conditions to natural visibility conditions.[20]

In summary, EPA is proposing to find that Connecticut has adequately addressed the LTS regional haze requirements.

D. Consultation With States and Federal Land Managers

On May 10, 2006, the MANE–VU State Air Directors adopted the Inter-RPO State/Tribal and FLM Consultation Framework that documented the consultation process within the context of regional phase planning, and was intended to create greater certainty and understanding among RPOs. MANE–VU States held ten consultation meetings and/or conference calls from March 1, 2007 through March 21, 2008. In addition to MANE–VU members attending these meetings and conference calls, participants from the Visibility Improvement State and Tribal Association of the Southeast (VISTAS) RPO, Midwest RPO, and the relevant Federal Land Managers were also in attendance. In addition to the conference calls and meeting, the FLMs were given the opportunity to review and comment on each of the technical documents developed by MANE–VU.

On February 4, 2009, Connecticut submitted a draft Regional Haze SIP to the relevant FLMs for review and comment pursuant to 40 CFR 51.308(i)(2). The FLMs provided comments on the draft Regional Haze SIP in accordance with 40 CFR 51.308(i)(3). The comments received from the FLMs were addressed and incorporated in Connecticut's SIP revision. Most of the comments were requests for additional detail as to various aspects of the SIP. These comments and Connecticut's response to comments can be found in the docket for this proposed rulemaking.

On July 17, 2009, Connecticut proposed its Regional Haze SIP for public hearing. Comments were received from U.S. EPA, the National Park Service, the U.S. Department of Agriculture and a private citizen.[21] To address the requirement for continuing consultation procedures with the FLMs under 40 CFR 51.308(i)(4), Connecticut commits in its SIP to ongoing consultation with the FLMs on emission strategies, major new source permits, assessments or rulemaking concerning sources identified as probable contributors to visibility impairment, any changes to the monitoring strategy, work on the periodic revisions to the SIP, and ongoing communications regarding visibility impairment.

EPA is proposing to find that Connecticut has addressed the requirements for consultation with the Federal Land Managers.

E. Periodic SIP Revisions and Five-Year Progress Reports

Consistent with the requirements of 40 CFR 51.308(g), Connecticut has committed to submitting a report on reasonable progress (in the form of a SIP revision) to the EPA every five years following the initial submittal of its regional haze SIP. The reasonable progress report will evaluate the progress made towards the RPGs for the MANE–VU Class I areas, located in Maine, New Hampshire, Vermont, and New Jersey.

Pursuant to 40 CFR 51.308(f), CT DEEP is required to submit periodic revisions to its Regional Haze SIP by July 31, 2018, and every ten years thereafter. CT DEEP acknowledges and agrees to comply with this schedule.

Pursuant to 40 CFR 51.308(d)(4)(v), CT DEEP will also make periodic updates to the Connecticut emissions inventory. CT DEEP proposes to complete these updates to coincide with the progress reports. Actual emissions will be compared to projected modeled emissions in the progress reports.

Lastly, pursuant to 40 CFR 51.308(h), CT DEEP will submit a determination of adequacy of its regional haze SIP revision whenever a progress report is submitted. Connecticut's regional haze SIP states that, depending on the findings of its five-year review, Connecticut will take one or more of the following actions at that time, whichever actions are appropriate or necessary:

- If Connecticut determines that the existing State Implementation Plan requires no further substantive revision in order to achieve established goals for visibility improvement and emissions reductions, CT DEEP will provide to the EPA Administrator a negative declaration that further revision of the existing plan is not needed.
- If CT DEEP determines that its implementation plan is or may be inadequate to ensure reasonable progress as a result of emissions from sources in one or more other State(s)

[20] Projected visibility improvements for each MANE–VU Class I area can be found in the NESCAUM document dated May 13, 2008, ''2018 Visibility Projections'' (*www.nescaum.org/documents/2018-visibility-projections-final-05-13-08.pdf/*).

[21] The comments and CT DEEP's responses have been included in the docket.

which participated in the regional planning process, Connecticut will provide notification to the EPA Administrator and to those other State(s). Connecticut will also collaborate with the other State(s) through the regional planning process for the purpose of developing additional strategies to address any such deficiencies in Connecticut's plan.

- If Connecticut determines that its implementation plan is or may be inadequate to ensure reasonable progress as a result of emissions from sources in another country, Connecticut will provide notification, along with available information, to the EPA Administrator.
- If Connecticut determines that the implementation plan is or may be inadequate to ensure reasonable progress as a result of emissions from sources within the State, Connecticut will revise its implementation plan to address the plan's deficiencies within one year from this determination.

IV. What action is EPA proposing to take?

EPA is proposing approval of Connecticut's November 18, 2009 SIP revision as meeting the applicable requirements of the Regional Haze Rule found in 40 CFR 51.308. In addition, EPA is proposing approval of Connecticut's RCSA Section 22a–174–19a, ''Control of sulfur dioxide emissions from power plants and other large stationary sources of air pollution'' and revisions to RCSA Section 22a–174–22, ''Control of Nitrogen Oxides Emissions,'' including subdivision 22a–174–22(e)(3), and CGS 16a–21a, ''Sulfur content of home heating oil and off-road diesel fuel. Suspension of requirements for emergency.'' Furthermore, pursuant to CT DEEP's request under parallel processing, EPA is proposing approval of Connecticut's proposed RCSA Section 22a–174–22d, ''Post-2011 Connecticut Ozone Season NO_X Budget Program.'' Under this procedure, EPA prepared this action before the State's final adoption of this regulation. Connecticut has already held a public hearing on the proposed regulation and received public comment. Connecticut may revise the regulation in response to comments. After Connecticut submits its final adopted regulation, EPA will review this regulation to determine whether it is significantly different from the proposed regulation. EPA will determine whether it is appropriate to approve the final rule with a description of any changes since the proposal, re-propose action based on the final adopted regulations, or take other actions as appropriate.

RCSA 22a–174–22d is a replacement for RCSA 22a–174–22c, ''The Clean Air Interstate Rule (CAIR) Nitrogen Oxides (NO_X) Ozone Season Trading Program,'' which is federally approved by EPA and currently being implemented in Connecticut.

V. Statutory and Executive Order Reviews

Under the Clean Air Act, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve State choices, provided that they meet the criteria of the Clean Air Act. Accordingly, this proposed action merely approves State law as meeting Federal requirements and does not impose additional requirements beyond those imposed by State law. For that reason, this proposed action:

- Is not a ''significant regulatory action'' subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the State, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Incorporation by reference, Intergovernmental relations, Lead, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

Authority: 42 U.S.C. 7401 *et seq.*

Dated: March 15, 2012.

Ira W. Leighton,

Acting Regional Administrator, EPA Region 1.

[FR Doc. 2012–7216 Filed 3–23–12; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 721

[EPA–HQ–OPPT–2011–0489; FRL–9341–6]

RIN 2070–AJ88

Significant New Use Rule for Hexabromocyclododecane and 1,2,5,6,9,10-Hexabromocyclododecane

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing a significant new use rule (SNUR) under section 5(a)(2) of the Toxic Substances Control Act (TSCA) for two chemical substances: Hexabromocyclododecane (Chemical Abstracts Service Registry Number (CASRN) 25637–99–4) and 1,2,5,6,9,10-hexabromocyclododecane (CASRN 3194–55–6), hereinafter collectively referred to as HBCD. This proposed rule would designate ''use in consumer textiles, other than for use in motor vehicles'' as a significant new use. This action would require persons who intend to manufacture (including import) or process HBCD for use in covered consumer textiles to notify EPA at least 90 days before commencing that activity. The required notification would provide EPA with the opportunity to evaluate the intended use and, if appropriate, to prohibit or limit that activity before it occurs. For this proposed rule, the general SNUR article exemption for persons who

import or process chemical substances as part of an article would not apply.

DATES: Comments must be received on or before May 25, 2012.

ADDRESSES: Submit your comments, identified by docket identification (ID) number EPA–HQ–OPPT–2011–0489, by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the online instructions for submitting comments.
- *Mail:* Document Control Office (7407M), Office of Pollution Prevention and Toxics (OPPT), Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001.
- *Hand Delivery:* OPPT Document Control Office (DCO), EPA East, Rm. 6428, 1201 Constitution Ave. NW., Washington, DC. Attention: Docket ID Number EPA–HQ–OPPT–2011–0489. The DCO is open from 8 a.m. to 4 p.m., Monday through Friday, excluding legal holidays. The telephone number for the DCO is (202) 564–8930. Such deliveries are only accepted during the DCO's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to docket ID number EPA–HQ–OPPT–2011–0489. EPA's policy is that all comments received will be included in the docket without change and may be made available online at *http://www.regulations.gov*, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through regulations.gov or email. The regulations.gov Web site is an ''anonymous access'' system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to EPA without going through regulations.gov, your email address will be automatically captured and included as part of the comment that is placed in the docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

Docket: All documents in the docket are listed in the docket index available at *http://www.regulations.gov.* Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available electronically at *http://www.regulations.gov*, or, if only available in hard copy, at the OPPT Docket. The OPPT Docket is located in the EPA Docket Center (EPA/DC) at Rm. 3334, EPA West Bldg., 1301 Constitution Ave. NW., Washington, DC. The EPA/DC Public Reading Room hours of operation are 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number of the EPA/DC Public Reading Room is (202) 566–1744, and the telephone number for the OPPT Docket is (202) 566–0280. Docket visitors are required to show photographic identification, pass through a metal detector, and sign the EPA visitor log. All visitor bags are processed through an X-ray machine and subject to search. Visitors will be provided an EPA/DC badge that must be visible at all times in the building and returned upon departure.

FOR FURTHER INFORMATION CONTACT: *For technical information contact:* Sue Slotnick, National Program Chemicals Division, Office of Pollution Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001; telephone number: (202) 566–1973; email address: *slotnick.sue@epa.gov*.

For general information contact: The TSCA–Hotline, ABVI–Goodwill, 422 South Clinton Ave., Rochester, NY 14620; telephone number: (202) 554–1404; email address: *TSCA-Hotline@epa.gov*.

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this action apply to me?

You may be potentially affected by this action if you manufacture (defined by statute to include import) or process HBCD for consumer textiles. Potentially affected entities may include, but are not limited to organizations identified by the following North American Industry Classification System (NAICS) codes:

- Chemical Manufacturing (NAICS code 325).
- Painting and Wall Covering Contractors (NAICS code 238320).
- Textile and Fabric Finishing (except Broadwoven Fabric) Mills (NAICS code 313312).
- Curtain and Drapery Mills (NAICS code 314121).
- Other Household Textile Product Mills (NAICS code 314129).
- All Other Miscellaneous Textile Product Mills (NAICS code 314999).
- Upholstered Household Furniture Manufacturing (NAICS code 337121).
- Household Furniture (except Wood and Metal) Manufacturing (NAICS code 337125).
- Mattress Manufacturing (NAICS code 337910).
- Blind and Shade Manufacturing (NAICS code 337920).
- Furniture Merchant Wholesalers (NAICS code 423210).
- Home Furnishing Merchant Wholesalers (NAICS code 423220).
- Reupholstery and Furniture Repair (NAICS code 811420).

This listing is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by this action. Other types of entities not listed in this unit could also be affected. The North American Industrial Classification System (NAICS) codes have been provided to assist you and others in determining whether this action might apply to certain entities. To determine whether you or your business may be affected by this action, you should carefully examine the applicability provisions in § 721.5. If you have any questions regarding the applicability of this action to a particular entity, consult the technical person listed under **FOR FURTHER INFORMATION CONTACT**.

In addition, chemical importers are subject to the TSCA section 13 (15 U.S.C. 2612) import certification requirements promulgated at 19 CFR 12.118 through 12.127; see also 19 CFR 127.28 (the corresponding EPA policy appears at 40 CFR part 707, subpart B). Chemical importers must certify that shipments of chemical substances comply with all applicable rules and orders under TSCA, including SNURs. In addition, any persons who export or intend to export a chemical substance that is the subject of a proposed or final SNUR are subject to the export notification provisions of TSCA section 12(b) (15 U.S.C. 2611(b)) (see § 721.20), and must comply with the export notification requirements in 40 CFR part 707, subpart D.

B. What should I consider as I prepare my comments for EPA?

1. *Submitting CBI.* Do not submit this information to EPA through regulations.gov or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD–ROM that

you mail to EPA, mark the outside of the disk or CD–ROM as CBI and then identify electronically within the disk or CD–ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

2. *Tips for preparing your comments.* When submitting comments, remember to:

i. Identify the document by docket ID number and other identifying information (subject heading, **Federal Register** date and page number).

ii. Follow directions. The Agency may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.

iii. Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.

iv. Describe any assumptions and provide any technical information and/or data that you used.

v. If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.

vi. Provide specific examples to illustrate your concerns and suggest alternatives.

vii. Explain your views as clearly as possible, avoiding the use of profanity or personal threats.

viii. Make sure to submit your comments by the comment period deadline identified.

II. Background

A. What action is the agency taking?

EPA is proposing a SNUR for HBCD which would require persons to notify EPA at least 90 days before commencing the manufacture (including import) or processing of HBCD for use in consumer textiles other than for use in motor vehicles. EPA is considering future regulatory action on additional uses of HBCD.

B. What is the agency's authority for taking this action?

Section 5(a)(2) of TSCA (15 U.S.C. 2604(a)(2)) authorizes EPA to determine that a use of a chemical substance is a ''significant new use.'' EPA must make this determination by rule after considering ''all relevant factors including:

- The projected volume of manufacturing and processing of a chemical substance,
- The extent to which a use changes the type or form of exposure of human beings or the environment to a chemical substance,
- The extent to which a use increases the magnitude and duration of exposure of human beings or the environment to a chemical substance, and
- The reasonably anticipated manner and methods of manufacturing, processing, distribution in commerce, and disposal of a chemical substance.''

In addition to these factors enumerated in TSCA section 5(a)(2), the statute authorizes EPA to consider any other relevant factors.

Once EPA determines that a use of a chemical substance is a significant new use, TSCA section 5(a)(1)(B) requires persons to submit a significant new use notice (SNUN) to EPA at least 90 days before they manufacture or process the chemical substance for that use (15 U.S.C. 2604(a)(1)(B)). As described in Unit II.C., the general SNUR provisions are found at 40 CFR part 721, subpart A.

C. Applicability of General Provisions

General provisions for SNURs appear under 40 CFR part 721, subpart A. These provisions describe persons subject to the rule, recordkeeping requirements, exemptions to reporting requirements, and applicability of the rule to uses occurring before the effective date of the final rule. Provisions relating to user fees appear at 40 CFR part 700. Additional provisions appear at § 721.1(c) which describe how persons subject to SNURs must comply with the same notice requirements and EPA regulatory procedures as submitters of Premanufacture Notices (PMNs) under TSCA section 5(a)(1)(A). In particular, these requirements include the information submission requirements of TSCA section 5(b) and 5(d)(1), the exemptions authorized by TSCA section 5(h)(1), (h)(2), (h)(3), and (h)(5), and the regulations at 40 CFR part 720. Once EPA receives a SNUN, the Agency may take regulatory action under TSCA section 5(e), 5(f), 6, or 7 to control the activities on which it has received the SNUN. If EPA does not take action, the Agency is required under TSCA section 5(g) to explain in the **Federal Register** its reasons for not taking action.

EPA proposes that a person who imports or processes HBCD as part of an article for use in consumer textiles (except for use in motor vehicles) would not be exempt from submitting a SNUN. (See rationale at Unit VI.C.) For this reason, § 721.45(f), which exempts persons importing or processing a chemical substance as part of an article, would not apply to this proposed SNUR.

Persons who export or intend to export a chemical substance(s) identified in a proposed or final SNUR are subject to the export notification provisions of TSCA section 12(b). The regulations that interpret TSCA section 12(b) appear at 40 CFR part 707, subpart D. Persons who import chemical substances are subject to the TSCA section 13 import certification requirements, codified at 19 CFR 12.118 through 12.127; see also 19 CFR 127.28. Such persons must certify that the shipment of the chemical substance(s) comply with all applicable rules and orders under TSCA, including any SNUR requirements. The EPA policy in support of import certification appears at 40 CFR part 707, subpart B.

III. Overview of HBCD

A. What chemicals are included in the proposed SNUR?

This proposed SNUR would apply to two chemical substances: Hexabromocyclododecane (CASRN 25637–99–4) and 1,2,5,6,9,10-hexabromocyclododecane (CASRN 3194–55–6). Hexabromocyclododecane is manufactured by adding bromine to technical grade 1,5,9-cyclododecatriene to make a chemical substance where the positions of the six bromine atoms are not specified on the cyclododecane ring, corresponding to CASRN 25637–99–4. The specific 1,2,5,6,9,10-hexabromocyclododecane isomer (CASRN 3194–55–6) is the major component of CASRN 25637–99–4. Throughout this proposed rule, the term ''HBCD'' represents both chemical substances, unless a specific CASRN is also noted.

B. What is the production volume of HBCD?

The Inventory Update Rule (IUR) [1] submissions to EPA reported annual U.S. import/production volumes of 10–50 million pounds (lb) in both 2002 and 2006 for CASRN 3194–55–6 (EPA, 2006). IUR submissions to EPA reported annual U.S. import/production volumes of 10,000 to 500,000 lb in 2002 for CASRN 25637–99–4; no import/production was reported in 2006 (EPA, 2006).

[1] As of August 16, 2011, the Inventory Update Rule (IUR) was renamed ''Chemical Data Reporting rule (CDR).'' See the TSCA Inventory Update Reporting Modifications; Chemical Data Reporting final rule in the **Federal Register** issue of August 16, 2011 (76 FR 50816) (FRL–8872–9).

C. What are the uses of HBCD?

Based on information gathered from research, industry, and government, EPA believes that HBCD is not used in consumer textiles other than for use in motor vehicles. The major use of HBCD is in polystyrene foam insulation boards used in construction. It is also used to a minor extent in high-impact polystyrene in electronic products and in textile coatings in carpets, vehicles, furniture, and upholstery, such as draperies (Posner, 2006). In the IUR data, one manufacturer/importer of HBCD (CASRN 3194–55–6) reported the use of the chemical substance under the NAICS code for textile and fabric finishing mills (EPA, 2006). For this use, 1% of the total production volume of the chemical substance was in consumer and commercial products. However, the reporting does not distinguish between commercial and consumer use (EPA, 2006).

Information available to EPA indicates that the use of HBCD in textiles is as a backcoating to function as a flame retardant. EPA conducted preliminary research to determine whether HBCD was used in textile applications for end products sold to consumers. In 2010, an HBCD expert with the Consumer Product Safety Commission (CPSC) expressed to EPA his understanding that HBCD is used only in non-consumer textiles such as firefighters' suits (CPSC, 2010). In 2011, EPA requested information from current and former manufacturers of HBCD. The responses indicate that only one manufacturer sells HBCD for textile uses. The company does not know whether the end use of any of those textiles is a consumer article. (ACC, 2011). Additionally, a representative of the furniture manufacturing company Herman Miller told EPA that HBCD is not in their products (Herman Miller, 2011). EPA also received information from a group of textile formulators that the end uses of HBCD-containing textiles are for military, institutional, and aviation uses only (EPP, 2011). EPA solicits comment on whether any of these uses could be considered consumer textile uses. (See definition of ''consumer textile'' at § 721.10281 in the regulatory language of this proposed rule).

EPA found that a small amount of HBCD is used in floor mats, headliners, and possibly other interior fabrics in motor vehicles made in the United States, including passenger vehicles. The automotive industry plans to phase out these uses in 2015. This phase-out is consistent with the addition of HBCD to the Annex XIV List of Substances Subject to Authorisation under the European Union's Registration, Evaluation, Authorisation and Restriction of Chemical Substances (REACH) regulations (REACH, 2011). See *http://echa.europa.eu/reach_en.asp.* The REACH regulations are expected to effectively ban the use of HBCD by major U.S. automotive companies unless authorized for use in the European Union (EU) after July 21, 2015. The companies are not likely to manufacture a different set of products for sale in the EU and for sale in the United States. Because the use of HBCD in textiles in motor vehicles is currently ongoing, that use is not included in this proposed rule.

Based on the sum of available information, EPA believes HBCD is not used in consumer textiles other than those used in motor vehicles. The Agency also believes HBCD could potentially be used in the future in consumer textiles in the United States because the chemical substance:

1. Is used in non-consumer textile applications in the United States including institutional, military, and aviation uses.

2. Is used in textiles in motor vehicles in the United States.

3. Has been used in residential consumer textile applications.

See more information on uses of HBCD in EPA's ''Economic Analysis of the Proposed Significant New Use Rule for Hexabromocyclododecane (HBCD)'' (EPA, 2011).

D. What are the potential health and environmental effects of HBCD?

1. *Human health effects.* Repeated exposure of HBCD to rats showed disturbances in thyroid hormone system and effects on the thyroid in males and females (Chengelis, 2001). A study by Eriksson, *et al.* (2006), concluded that neonatal exposure of HBCD to mice affected spontaneous motor behavior, learning and memory processes in adult mice. However, this study was not conducted according to established Organization for Economic Cooperation and Development (OECD) Test Guidelines.

In a recently conducted, more robust, 2-generation reproductive toxicity study in rats conducted according to established OECD test guidelines, HBCD showed treatment-related reproductive effect (a significant decrease in the number of primordial follicles in the F1 females) (Ema, *et al.,* 2008). Although this decrease in ovarian follicles did not affect any reproductive parameters in this study, this effect is suggestive of potential reproductive toxicity. Developmental effects were observed including delays in eye opening in the second (F2) generation and transient changes in learning and memory in F1 males, but exposure did not cause any changes in spontaneous behavior. In addition, there was high and dose-dependent pup mortality during lactation (Ema, *et al.,* 2008).

2. *Environmental effects.* Laboratory studies have shown that HBCD is capable of producing adverse effects in a variety of organisms including algae, fish, invertebrates, and soil-dwelling organisms at environmentally relevant concentrations. HBCD is toxic to algae and acutely toxic to fish embryos (Desjardins, *et al.,* 2004 and Deng, *et al.,* 2009). A number of sub-lethal effects (e.g., altered thyroid status, protein metabolism, oxidative stress, reproductive activity) have also been observed in fish (Palace, *et al.,* 2008; Kling *et al.,* 2009; Zhang, *et al.,* 2008; and Ronisz, *et al.,* 2004). One study reported a reduced number and size of daphnid offspring in first and second generations (Drottar, 1998). Thyroid hormone-dependent developmental effects were observed in tadpoles (*Xenopus laevis*) exposed to HBCD (Schriks, *et al.,* 2006). HBCD has been reported to reduce egg production and lower biomass in soil dwelling organisms (*Lumbriculus variegatus*) (Oetken, *et al.,* 2001). HBCD administered to chicken (*Gallus domesticus*) embryonic hepatocytes *in vitr*o resulted in significant alterations in expression of genes (mRNA) associated with liver and thyroid function (Crump, *et al.,* 2008). Thinner egg shells were measured in American kestrels exposed to a combination of polybrominated diphenyl ethers (PBDEs) and HBCD (Fernie, *et al.,* 2009).

E. What are the potential sources and routes of exposure to HBCD?

Because HBCD is not chemically bound to its substrate (the protected textile material), there is potential for HBCD to be released at any point in the lifecycle. There is potential for release when the HBCD is initially manufactured, when it is being formulated into the material that is commonly used in textile back coatings, as well as when it is being combined with the textile material to which it is added. In addition, HBCD can be released during the service life of the textile material containing it, including release into water used to wash the treated textiles or into the air via dust particulates. Workers and the general population can be exposed to HBCD through direct contact as it migrates across land, in air, and in water by diffusion or environmental transport.

Other opportunities for release can occur at the end of the lifecycle of the consumer articles when they are transported as waste and disposed of, although incineration at high temperatures destroys the HBCD (Posner, 2006).

Evidence strongly suggests there is potential for exposure to the general population from HBCD in the environment and also from products and dust in the home and workplace. HBCD is found world-wide in the environment and wildlife. Human exposure is evidenced from its presence in breast milk, adipose tissue, and blood (Covaci, *et al.,* 2006). The chemical substance bioaccumulates and biomagnifies in food chains. The frequent detection of HBCD over a large geographic area, with increasing exposure in remote locations such as the Arctic, where no demonstrable local sources exist that can account for these exposures, suggest that HBCD is persistent and undergoes long-range transport (UNEP, 2007).

To the extent HBCD is present in household applications (e.g., building foam, furniture upholstery, carpeting), children could be exposed, especially given children's increased exposure via dust and the hand-to-mouth ingestion pathway. *In vitro* experiments conducted to demonstrate leaching of HBCD from textiles showed that the presence of simulated biological fluids (sweat, saliva) and fruit juices enhances the leaching of HBCD from back-coated samples (Ghanem, 2009). Children's exposure to HBCD from mouthing of textiles and from ingestion of dust has been estimated (EC, 2008).

HBCD has been measured in air and sediment in Scandinavian countries, North America and Asia (Covaci, *et al.,* 2006 and Arnot, *et al.,* 2009). HBCD has also been measured in marine and arctic mammals, freshwater and marine fish, aquatic invertebrates, birds and bird eggs, and one plant species (Covaci, *et al.,* 2006 and Arnot, *et al.,* 2009). HBCD has been detected in Arctic air in northern Scandinavia and in Arctic birds and bird eggs, Arctic fish, ringed seals and polar bears (UNEP, 2009). It has been detected in freshwater, marine, and avian organisms, and in upper trophic-level mammals (polar bears and seals).

For more information on HBCD concerning its physical-chemical properties, fate, releases, and human and environmental exposure, see EPA's ''Hexabromocyclododecane (HBCD) Action Plan'' dated August 18, 2010 (HBCD Action Plan, 2010).

IV. Summary of Proposed Rule

EPA is proposing to designate as a significant new use any use of HBCD in consumer textiles other than for use in motor vehicles. EPA believes the only current use of HBCD for consumer textiles is in motor vehicles. Thus any use of HBCD in consumer textiles (other than for textiles in motor vehicles) would be a significant new use. A proposed definition of ''consumer textile'' can be found at § 721.10281 of the regulatory text of this proposed rule. The proposed definition of ''motor vehicle'' refers to 40 CFR 85.1703.[2]

This proposed rule would add a section to 40 CFR part 721 to require persons who intend to manufacture (including import) or process HBCD for an activity preliminarily designated as a significant new use by this action to notify EPA at least 90 days before commencing that activity. The required notification would provide EPA with the opportunity to evaluate the intended use and, if appropriate, to prohibit or limit that activity before it occurs. For this proposed rule, the general SNUR exemption for persons that import or process chemical substances as part of an article at § 721.45(f) would not apply. (See discussion at Unit VI.C.)

V. Significant New Use Determination

A. Rationale

As summarized in Unit III.D. and E., EPA has concerns regarding the potential exposure to and human health and environmental effects of HBCD. EPA believes that HBCD could be manufactured or processed for consumer textiles other than for use in motor vehicles in the future. Accordingly, EPA wants the opportunity to evaluate and control, where appropriate, activities associated with that use, if such manufacturing or processing were to be commenced in the future. The required notification provided by a SNUN would provide EPA with the opportunity to evaluate activities associated with the significant new use and an opportunity to protect against unreasonable risks, if any, from exposure to HBCD.

Consistent with EPA's past practice for issuing SNURs under TSCA section 5(a)(2), EPA's decision to propose a SNUR for a particular chemical use need not be based on an extensive evaluation of the hazard, exposure, or potential risk associated with that use. Rather, the Agency's action is based on EPA's determination that if the use begins or resumes, it may present a risk that EPA should evaluate before the manufacturing or processing for that use begins. Since the new use does not currently exist, deferring a detailed consideration of potential risks or hazards related to that use is an effective use of resources. If a person decides to begin manufacturing or processing the chemical for the new use, the SNUN to EPA allows EPA to evaluate the use according to the specific parameters and circumstances surrounding that intended use.

B. Objectives

Based on the considerations in Unit V.A., EPA has the following objectives with regard to the significant new use that is preliminarily designated in this proposed rule:

1. EPA would receive notification of any person's intent to manufacture (including import) or process HBCD for the described significant new use before that activity begins.

2. EPA would have an opportunity to review and evaluate data submitted in a SNUN before the SNUN submitter begins manufacturing or processing of HBCD for the described significant new use.

3. EPA would be able to regulate prospective manufacturers or processors of HBCD before the described significant new use of the chemical substance(s) occur, provided that regulation is warranted pursuant to TSCA sections 5(e), 5(f), 6, or 7.

C. Relevant Factors Considered for This Proposed SNUR

TSCA states that EPA's determination that a use of a chemical substance is a significant new use must be made after consideration of all relevant factors, including those listed at TSCA section 5(a)(2) (see list at Unit II.B.). EPA has preliminarily determined that manufacturing or processing of HBCD for use in consumer textiles other than

[2] The definition at 40 CFR 85.1703 is: ''a vehicle which is self-propelled and capable of transporting a person or persons or any material or any permanently or temporarily affixed apparatus shall be deemed a motor vehicle, unless any one or more of the criteria set forth below are met, in which case the vehicle shall be deemed not a motor vehicle and excluded from the operation of the [Clean Air] Act:

(1) The vehicle cannot exceed a maximum speed of 25 miles per hour over level, paved surfaces; or

(2) The vehicle lacks features customarily associated with safe and practical street or highway use, such features including, but not being limited to, a reverse gear (except in the case of motorcycles), a differential, or safety features required by state and/or federal law; or

(3) The vehicle exhibits features which render its use on a street or highway unsafe, impractical, or highly unlikely, such features including, but not being limited to, tracked road contact means, an inordinate size, or features ordinarily associated with military combat or tactical vehicles such as armor and/or weaponry.''

40 CFR 85.1703 is available online at: *http://www.gpo.gov/fdsys/pkg/CFR–2000-title40-vol12/xml/CFR–2000-title40-vol12-sec85–1703.xml.*

for use in motor vehicles is a significant new use. This determination is based primarily on the following factor listed at TSCA section 5(a)(2): ''The extent to which a use increases the magnitude and duration of exposure of human beings or the environment to a chemical substance.'' The latest information available to EPA indicates that the only ongoing use of HBCD in consumer textiles is for use in motor vehicles. Initiation of new uses of HBCD in consumer textiles could increase the magnitude and duration of exposure to the general population from HBCD in the environment and from products and dust in the home and workplace. Workers could be exposed to HBCD at facilities of all types involved in the lifecycle of the products, as described in greater detail in Unit III.E. Releases to the environment are expected to occur during the service life of the textiles containing HBCD. Such increase in releases could contribute additional HBCD to the atmosphere, long-range transport, and greater concentrations in water, which could be detrimental to overall environmental and human health. Thus, EPA believes that initiating the use of HBCD in consumer textiles other than for use in motor vehicles would increase the magnitude and duration of exposure to humans and the environment over that which would otherwise exist.

D. Request for Comment

EPA welcomes comment on all aspects of this proposed rule, including:

1. The basis for the significant new use determination presented for this proposed rule.

2. Information about any ongoing manufacture, import, or processing of HBCD for use in consumer textiles.

VI. Alternative Regulatory Approaches

Before proposing this SNUR, EPA considered the following alternative regulatory actions:

A. Promulgate a TSCA Section 8(a) Reporting Rule

Under a TSCA section 8(a) rule, EPA could, among other things, generally require persons to report information to the Agency when they intend to manufacture or process a listed chemical for a specific use or any use. However, for HBCD in consumer textiles, the use of TSCA section 8(a) rather than SNUR authority would have several limitations. First, if EPA were to require reporting under TSCA section 8(a) instead of TSCA section 5(a), EPA would not have the opportunity to review human and environmental hazards and exposures associated with the use in consumer textiles and, if necessary, take immediate follow-up regulatory action under TSCA sections 5(e) or 5(f) to prohibit or limit the activity before it begins, if warranted. In addition, EPA might not receive important information from small businesses, because such firms generally are exempt from TSCA section 8(a) reporting requirements. In view of health and environmental concerns related to HBCD, if used for the proposed significant new use, EPA believes that a TSCA section 8(a) rule for these chemical substances would not meet EPA's regulatory objectives.

B. Regulate HBCD in Consumer Textiles Under TSCA Section 6

EPA may regulate under TSCA section 6 if ''the Administrator finds that there is a reasonable basis to conclude that the manufacture, processing, distribution in commerce, use or disposal of a chemical substance or mixture . . . presents or will present an unreasonable risk of injury to health or the environment.'' (TSCA section 6(a)). EPA concluded that risk management action under TSCA section 6 is not necessary at this time because EPA:

1. Believes HBCD is not being used in consumer textiles in the United States, other than for use in motor vehicles.

2. Has not determined as of this date that use of HBCD in motor vehicles presents unreasonable risk.

3. Expects the use in motor vehicles to end within a few years. This proposed SNUR would allow the Agency to address the potential risks associated with the proposed significant new use.

C. Allow the Exemption for Persons Who Import or Process HBCD as Part of Articles That Would Be Subject to the Proposed SNUR

Under the SNUR exemption provision at § 721.45(f), a person who imports or processes a chemical substance covered by a SNUR identified in 40 CFR part 721, subpart E, as part of an article is not generally subject to the notification requirements of § 721.25 for that chemical substance. However, EPA is concerned that exempting HBCD as part of articles would render the SNUR less effective because of the possibility that consumer textile articles containing HBCD, the primary concern of EPA associated with this proposed rule, could be imported or processed for uses subject to this proposed SNUR without the submission of a SNUN. This proposed rule would not include the exemption at § 721.45(f).

VII. Applicability of Rule to Uses Occurring Before Effective Date of the Final Rule

As discussed in the **Federal Register** of April 24, 1990 (55 FR 17376), EPA has decided that the intent of TSCA section 5(a)(1)(B) is best served by designating a use as a significant new use as of the date of publication of this proposed rule rather than as of the effective date of the final rule. If uses begun after publication of the proposed rule were considered ongoing rather than new, it would be difficult for EPA to establish SNUR notification requirements, because a person could defeat the SNUR by initiating the proposed significant new use before the rule became final, and then argue that the use was ongoing as of the effective date of the final rule. Thus, persons who begin commercial manufacture or processing of the chemical substance(s) (including manufacturing or processing the chemical substance(s) as part of an article) for a use that would be regulated through this proposed rule, if finalized, would have to cease any such activity before the effective date of the rule if and when finalized. To resume their activities, these persons would have to comply with all applicable SNUR notification requirements and wait until the notification review period, including all extensions, expires. EPA has promulgated provisions (§ 721.45(h)) to allow persons to submit a SNUN before the effective date of the SNUR. If a person were to meet the conditions of § 721.45(h), that person would be considered to have met the requirements of the final SNUR for those activities. If persons who begin commercial manufacture, import, or processing of the chemical substance between publication of the proposed rule and the effective date of the final SNUR do not meet the conditions of advance compliance, they must cease that activity before the effective date of the final rule. To resume their activities, these persons would have to comply with all applicable SNUN requirements and wait until the notification review period, including all extensions, expires.

VIII. Test Data and Other Information

EPA recognizes that TSCA section 5 does not require the development of any particular test data before submission of a SNUN. There are two exceptions:

1. Development of test data is required where the chemical substance subject to the SNUR is also subject to a test rule under TSCA section 4 (see TSCA section 5(b)(1)).

2. Development of test data may be necessary where the chemical substance has been listed under TSCA section 5(b)(4) (see TSCA section 5(b)(2)).

In the absence of a TSCA section 4 test rule or a TSCA section 5(b)(4) listing covering the chemical substance, persons are required only to submit test data in their possession or control and to describe any other data known to or reasonably ascertainable by them (TSCA section 5(d); 40 CFR 720.50 and 40 CFR 721.25). However, as a general matter, EPA recommends that SNUN submitters include data that would permit a reasoned evaluation of risks posed by the chemical substance during its manufacture, processing, use, distribution in commerce, or disposal. EPA encourages persons to consult with the Agency before submitting a SNUN. As part of this optional pre-SNUN consultation, EPA would discuss specific data it believes may be useful in evaluating a significant new use. SNUNs submitted for significant new uses without any test data may increase the likelihood that EPA will take action under TSCA section 5(e) to prohibit or limit activities associated with this chemical.

SNUN submitters should be aware that EPA will be better able to evaluate SNUNs that provide detailed information on:

- Human exposure and environmental releases that may result from the significant new use of the chemical substance.
- Potential benefits of the chemical substance.
- Information on risks posed by the chemical substances compared to risks posed by potential substitutes.

IX. SNUN Submissions

According to § 721.1(c), persons submitting a SNUN must comply with the same notification requirements and EPA regulatory procedures as persons submitting a PMN, including submission of test data on health and environmental effects as described in 40 CFR 720.50. SNUNs must be on EPA Form No. 7710–25, generated using e-PMN software, and submitted to the Agency in accordance with the procedures set forth in 40 CFR 720.40 and 40 CFR 721.25. The e-PMN software is available electronically at *http://www.epa.gov/opptintr/newchems*.

X. Economic Analysis

EPA has evaluated the potential costs of establishing SNUR reporting requirements for potential manufacturers and processors of HBCD in consumer textiles. The evaluation is in the ''Economic Analysis of the Proposed Significant New Use Rule for Hexabromocyclododecane (HBCD)'' (EPA, 2011). It is briefly summarized here and is available in the docket for this proposed rule.

Because there appears to be no use of HBCD in consumer textiles in the United States at the current time, other than for use in motor vehicles, EPA expects very few, if any, entities would submit a SNUN. As a result, the economic impact of this rule is anticipated to be either zero or very low.

In the event that a SNUN is submitted, costs are estimated at approximately $8,300 per SNUN submission for large businesses and $5,900 for small businesses, and include the cost to prepare and submit the SNUN and the payment of a user fee. Businesses that submit a SNUN would be subject to either a $2,500 user fee required by 40 CFR 700.45(b)(2)(iii), or, if they are a small business with annual sales of less than $40 million when combined with those of the parent company (if any), a reduced user fee of $100 (40 CFR 700.45(b)(1)). In its evaluation of this proposed rule, EPA also considered the potential costs a company might incur by avoiding or delaying the significant new use in the future, but these costs have not been quantified.

XI. References

The following documents are specifically referenced in the preamble for this proposed rule. In addition to these documents, other materials may be available in the docket established for this proposed rule under docket ID number EPA–HQ–OPPT–2011–0489, which you can access through *http://www.regulations.gov*. Those interested in the information considered by EPA in developing this proposed rule, should also consult documents that are referenced in the documents that EPA has placed in the docket, regardless of whether the other documents are physically located in the docket.

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XII. Statutory and Executive Order Reviews

A. Regulatory Planning and Review

Under Executive Order 12866, entitled ''Regulatory Planning and Review'' (58 FR 51735, October 4, 1993), this action has been designated a ''significant regulatory action.'' Accordingly, EPA submitted this action to the Office of Management and Budget (OMB) for review under Executive Orders 12866 and 13563, entitled ''Improving Regulation and Regulatory Review'' (76 FR 3821, January 21, 2011), and any changes made in response to OMB recommendations have been documented in the docket for this action as required by section 6(a)(3)(E) of the Executive Order.

EPA has prepared an economic analysis of this action, entitled ''Economic Analysis of the Proposed Significant New Use Rule for Hexabromocyclododecane (HBCD)'' (EPA, 2011). A copy of the document is available in the docket for this proposed rule and is summarized in Unit X.

B. Paperwork Reduction Act

According to the Paperwork Reduction Act (PRA), 44 U.S.C. 3501 *et seq.,* an Agency may not conduct or sponsor, and a person is not required to respond to a collection of information that requires OMB approval under PRA, unless it has been approved by OMB and displays a currently valid OMB control number. The OMB control numbers for certain EPA regulations in title 40 of the CFR, after appearing in the **Federal Register**, are listed in 40 CFR part 9, and included on the related collection instrument, or form, if applicable.

The information collection requirements related to this action have already been approved by OMB pursuant to PRA under OMB control number 2070–0038 (EPA ICR No. 1188). This action does not impose any burden requiring additional OMB approval. If an entity were to submit a SNUN to the Agency, the annual burden is estimated to average 97 hours per response. This burden estimate includes the time needed to review instructions; search existing data sources; gather and maintain the data needed; and complete, review, and submit the required SNUN.

Send any comments about the accuracy of the burden estimate, and any suggested methods for minimizing respondent burden to the Director, Collection Strategies Division, Office of Environmental Information (2822T), Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001. Please remember to include the OMB control number in any correspondence, but do not submit any completed forms to this address.

C. Small Entity Impacts

Pursuant to section 605(b) of the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 *et seq.*), the Agency hereby certifies that promulgation of this SNUR would not have a significant adverse economic impact on a substantial number of small entities. The rationale supporting this conclusion is as follows.

Under RFA, small entities include small businesses, small organizations, and small governmental jurisdictions. Small entity is defined in accordance with section 601 of RFA as: A small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field. For purposes of assessing the impacts of this proposed rule on small entities, EPA has determined that this proposed rule is not expected to impact any small not-for-profit organizations or small governmental jurisdictions. As such, the Agency estimated potential impacts on small business.

A SNUR applies to any person (including small or large entities) who intends to manufacture, import, or process a chemical substance for a use the EPA has designated as a ''significant new use.'' By definition of the word ''new,'' and based on information currently available to EPA, it appears that no small or large entities presently engage in such activity. Since this proposed SNUR would require a person who intends to engage in such activity in the future to first notify EPA by submitting a SNUN, no economic impact will occur unless someone files a SNUN to pursue a significant new use in the future or forgoes profits by avoiding or delaying the significant new use. Although some small entities may decide to conduct such activities in the future, EPA cannot presently determine how many, if any, there may be. However, EPA's experience to date is that, in response to the promulgation of SNURs covering over 1,000 chemical substances, the Agency receives only a handful of SNUNs per year. For example, the number of SNUNs was four in Federal fiscal year 2005, eight in FY2006, six in FY2007, eight in FY2008, and seven in FY2009. During this 5-year period, three small entities submitted a SNUN. Therefore, EPA believes that the potential economic impact of complying with a SNUR is not expected to be significant or adversely impact a substantial number of small entities. In a SNUR that published as a final rule on August 8, 1997 (62 FR 42690) (FRL–5735–4), the Agency presented its general determination that proposed

and final SNURs are not expected to have a significant economic impact on a substantial number of small entities, which was provided to the Chief Counsel for Advocacy of the Small Business Administration.

D. Unfunded Mandates

Based on EPA's experience with proposing and finalizing SNURs, State, local, and Tribal governments have not been impacted by these rulemakings, and EPA does not have any reason to believe that any State, local, or Tribal government would be impacted by this proposed rule. As such, EPA has determined that this regulatory action would not impose any enforceable duty, contain any unfunded mandate, or otherwise have any effect on small governments subject to the requirements of sections 202, 203, 204, or 205 of the Unfunded Mandates Reform Act of 1995 (UMRA) (2 U.S.C. 1531–1538).

E. Federalism

This action would not have federalism implications because it is not expected to have a substantial direct effect on States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132, entitled ''Federalism'' (64 FR 43255, August 10, 1999).

F. Indian Tribal Governments

This action would not have tribal implications as specified in Executive Order 13175, entitled ''Consultation and Coordination with Indian Tribal Governments'' (65 FR 67249, November 9, 2000). This action is not expected to have substantial direct effects on Indian Tribes, would not significantly or uniquely affect the communities of Indian Tribal governments, and would not involve or impose any requirements that affect Indian Tribes. Thus, Executive Order 13175 does not apply to this action.

G. Protection of Children

This action is not subject to Executive Order 13045, entitled ''Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997), because this is not an economically significant regulatory action as defined by Executive Order 12866, and this action does not address environmental health or safety risks disproportionately affecting children.

H. Effect on Energy Supply, Distribution, or Use

This action is not a ''significant energy action'' as defined in Executive Order 13211, entitled ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use'' (66 FR 28355, May 22, 2001), because this action is not likely to have a significant adverse effect on the supply, distribution, or use of energy.

I. Technical Standards

Because this action would not involve any technical standards, section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA) (15 U.S.C. 272 note), does not apply to this action.

J. Environmental Justice

This action would not entail special considerations of environmental justice related issues as delineated by Executive Order 12898, entitled ''Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations'' (59 FR 7629, February 16, 1994).

List of Subjects in 40 CFR Part 721

Environmental protection, Chemicals, Hazardous substances, Reporting and recordkeeping requirements.

Dated: March 20, 2012.

Wendy C. Hamnett,

Director, Office of Pollution Prevention and Toxics.

Therefore, it is proposed that 40 CFR part 721 be amended as follows:

PART 721—[AMENDED]

1. The authority citation for part 721 continues to read as follows:

Authority: 15 U.S.C. 2604, 2607, and 2625(c).

2. Add § 721.10281 to subpart E to read as follows:

§ 721.10281 Hexabromocyclododecane and 1,2,5,6,9,10-hexabromocyclododecane.

(a) *Chemical substances and significant new uses subject to reporting.* (1) The chemical substances identified as hexabromocyclododecane (CASRN 25637–99–4) and 1,2,5,6,9,10-hexabromocyclododecane (CASRN 3194–55–6) are subject to reporting under this section for the significant new use described in paragraph (a)(2) of this section.

(2) The significant new use is use in consumer textiles, other than for use in motor vehicles.

(b) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Definitions.* The definitions in § 721.3 apply to this section. In addition, the following definitions apply:

Consumer textile means any cloth, fabric, or other item produced during the milling process (including spinning, weaving, knitting, felting, or finishing), consisting in whole or in part as a product that is sold to or made available to a private individual who uses the product in or around a permanent or temporary household or residence, during recreation, or for any personal use or enjoyment. Consumer textiles include, but are not limited to, upholstered household furniture, mattresses, and draperies.

Motor vehicle has the meaning found at 40 CFR 85.1703.

(2) *Revocation of article exemption.* The provisions of § 721.45(f) do not apply to this section. A person who imports or processes the chemical substances identified in paragraph (a)(1) of this section as part of an article for the significant new use described in paragraph (a)(2) of this section must submit a significant new use notice (SNUN).

[FR Doc. 2012–7207 Filed 3–23–12; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

Pipeline and Hazardous Materials Safety Administration

49 CFR Part 173

[Docket No. PHMSA–2010–0201 (HM–254)]

RIN 2137–AE62

Hazardous Materials: Approval and Communication Requirements for the Safe Transportation of Air Bag Inflators, Air Bag Modules, and Seat-Belt Pretensioners

AGENCY: Pipeline and Hazardous Materials Safety Administration (PHMSA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: In this NPRM, PHMSA is proposing to revise the Hazardous Materials Regulations applicable to air bag inflators, air bag modules, and seat-belt pretensioners. The proposed changes would incorporate the provisions of two special permits into the regulations. In addition, PHMSA proposes to revise the current approval and documentation requirements for a material appropriately classified as a

UN3268 air bag inflator, air bag module, or seat-belt pretensioner. The proposed changes will, if adopted, reduce the regulatory burden on the automotive industry while maintaining the current level of safety.

DATES: Comments must be submitted by May 25, 2012. To the extent possible, PHMSA will consider late-filed comments as a final rule is developed.

ADDRESSES: You may submit comments identified by the docket number (PHMSA–2010–0201 (HM–254)) by any of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov*. Follow the online instructions for submitting comments.
- *Fax:* 1–202–493–2251.
- *Mail:* Docket Operations, U.S. Department of Transportation, West Building, Ground Floor, Room W12–140, Routing Symbol M–30, 1200 New Jersey Avenue SE., Washington, DC 20590.
- *Hand Delivery:* To Docket Operations; Room W12–140 on the ground floor of the West Building, 1200 New Jersey Avenue SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Instructions: All submissions must include the agency name and docket number for this notice at the beginning of the comment. All comments received will be posted without change to the Federal Docket Management System (FDMS), including any personal information. Please see the Privacy Act section within the Regulatory Analyses and Notices.

Docket: For access to the dockets to read background documents or comments received, go to *http://www.regulations.gov* or DOT's Docket Operations Office (see **ADDRESSES**).

Privacy Act: Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (Volume 65, Number 70; Pages 19477–78) or you may visit *http://www.dot.gov*.

FOR FURTHER INFORMATION CONTACT: Matthew Nickels, Standards and Rulemaking Division, Office of Hazardous Materials Safety, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, telephone (202) 366–8553.

SUPPLEMENTARY INFORMATION:

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I. Background
II. Summary Review of Proposed Amendments
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I. Background

The Hazardous Materials Regulations (HMR; 49 CFR Parts 171–180) are issued by the Pipeline and Hazardous Materials Safety Administration (PHMSA) and govern the safe transportation of hazardous materials by highway, rail, vessel, and air. The scope of the HMR includes hazardous materials classification, packaging, hazard communication, emergency response information, and training, etc. Furthermore, included within these provisions are the regulations for the transportation of air bag inflators, air bag modules, and seat-belt pretensioners in § 173.166.

Found in § 173.166(a), PHMSA provides definitions for an air bag inflator (a gas generator used to inflate an air bag in a supplemental restraint system in a motor vehicle), an air bag module (the air bag inflator plus an inflatable bag assembly), and a seat-belt pretensioner (containing similar hazardous materials and is used in the operation of a seat-belt restraining system in a motor vehicle). In § 173.166(b)–(f), PHMSA also provides the regulatory requirements for the classification, EX number assignments, exceptions, packagings, and labeling requirements for these air bag inflators, air bag modules, and seat-belt pretensioners.

In a petition dated June 24, 2008 (P–1523) and two addendums submitted on February 26, 2009 and June 14, 2011, the North American Automotive Hazmat Action Committee (NAAHAC), representing numerous automobile manufacturers and component suppliers located in North America as well as in Asia and Europe, requested revisions to requirements in the HMR applicable to safety restraint systems (e.g., air bag inflators, air bag modules, and seat-belt pretensioners). NAAHAC suggests that subjecting Class 9, UN3268 safety restraint systems to the EX approval process in accordance with § 173.56 imposes an unnecessary burden on the industry that does not advance safety.

In addition, NAAHAC suggests that PHMSA incorporate the following long-standing special permits into the HMR:

- *DOT–SP 12332*—This special permit authorizes the transportation in commerce of certain air bag inflators, air bag modules, and seat-belt pretensioners that meet the requirements for use in the United States, and have been removed from or were intended to be used in a motor vehicle without listing the EX-approval numbers or product names on the shipping papers. This special permit applies to Class 9, UN3268 materials that are packaged using either of the two following methods:

a. Non-specification steel drums with a wall and lid thickness not less than 20 gauge. The lid must be securely affixed with a lever-locking or bolted-ring assembly. The threaded bung closure in the top of the drum must be removed prior to shipment and the bung opening covered with waterproof plastic tape or a waterproof soft plastic cap that must easily provide ventilation of the drum contents in the event of a fire. The drum may be filled with any combination of air bag inflators, air bag modules, or seat-belt pretensioner devices to a capacity not greater than fifty (50) percent of the drum's total volume; inner packagings are not necessary; or

b. Outer packagings that are UN Standard 4H2 solid plastic boxes or non-specification rugged reusable plastic containers with either trays or cushioning material in the containers to prevent movement of articles during transportation. Inner packagings are static-resistant plastic bags or trays, as appropriate.

- *DOT–SP 13996*—This special permit provides relief from § 173.166(e)(4) in that it authorizes the transportation, under certain conditions, of Class 9, UN3268 air bag inflators, air bag modules and seat-belt pretensioners in reusable containers manufactured from high-strength plastic, metal, or other suitable material, or other dedicated handling devices.

As stated above, in addition to NAAHAC's petition suggesting that subjecting Class 9, UN3268 safety restraint systems to the EX approval process in accordance with § 173.56 imposes an unnecessary burden on the industry that does not advance safety, the petition also suggests that PHMSA incorporate these two long-standing special permits into the HMR. PHMSA agrees with the petition and proposes to amend the HMR to incorporate certain requirements based on these two existing special permits issued under 49 CFR Part 107, Subpart B (§§ 107.101 to 107.127). These special permits set forth alternative requirements (variances) to the requirements in the HMR by means that achieve a safety level that at the least corresponds to the safety level required under the regulations and that is consistent with the public interest. Congress expressly authorized DOT to issue variances in the Hazardous Materials Transportation Act of 1975, when appropriate.

The HMR generally are performance-oriented regulations that provide the regulated community a certain amount of flexibility in meeting safety requirements. Even so, not every transportation situation can be anticipated and built into the regulations. The hazardous materials community is particularly strong at developing new materials and technologies and innovative ways of moving materials. Special permits enable the hazardous materials industry to quickly, effectively and safely integrate new products and technologies into the production and transportation stream. Thus, special permits allow developing products and technologies to move in commerce for testing and other purposes, promote increased transportation efficiency and productivity, and support global competitiveness.

A special permit must achieve at least an equivalent level of safety to that specified in the HMR. Implementation of new technologies and operational techniques can enhance safety because the authorized operations or activities achieve a greater level of safety than currently required under the regulations. Special permits also reduce the volume and complexity of the HMR by addressing unique or infrequent transportation situations that would be difficult to accommodate in regulations intended for use by a wide range of shippers and carriers. PHMSA conducts ongoing reviews of special permits to identify widely-used and longstanding special permits with established safety records for incorporation into the HMR for broader applicability.

Incorporating these two special permits into regulations reduces paperwork burdens and facilitates commerce while maintaining an acceptable level of safety. Additionally, adoption of special permits as rules of general applicability provides wider access to the benefits and regulatory flexibility of the provisions granted in the special permits. Factors that influence whether a specific special permit is a candidate for regulatory action include: The safety record for hazardous materials transported; transportation operations conducted under a special permit; the potential for broad application of a special permit; suitability of provisions in the special permit for incorporation into the HMR; rulemaking activity in related areas; and agency priorities.

Regarding the proper classifying of air bag inflators, air bag modules, and seat-belt pretensioners, NAAHAC notes that it is the responsibility of the device manufacturer to ensure that testing, verification, and classification of its products has been conducted in accordance with the HMR. Special Provision 160 (see § 172.102 of the HMR) requires the manufacturer to get the air bag inflators, air bag modules, and seat-belt pretensioners tested by a DOT explosives test lab, in accordance with Test series 6(c) of Part I of the UN Manual of Tests and Criteria (incorporated by reference; see § 171.7 of the HMR), and then the manufacturer must submit a hazard classification recommendation from that DOT explosives test lab to the DOT. This test is performed to ensure that air bag inflators, air bag modules, and seat-belt pretensioners meet the criteria for classification as Class 9 materials. To pass the test there must be no fragmentation of the device casing or pressure vessel, and no projection hazard or thermal effect that would significantly hinder emergency response efforts in the immediate vicinity. Failure of Test series 6(c) necessitates treatment as an explosive in Class 1, including the EX approval process and inclusion of the EX number on the shipping documentation.

NAAHAC indicates that the current requirement to reference the EX number on the shipping paper for Class 9, UN3268 safety restraint systems is a burden that offers little in terms of hazard communication or transportation safety. In fact, NAAHAC states that the requirement imposes unnecessary costs to obtain, record, and transfer the EX number to shipping documents. According to NAAHAC, the industry-wide costs associated with first verifying and then transferring the EX number to the shipping paper is in excess of $890,000.00 annually.

II. Summary Review of Proposed Amendments

PHMSA agrees with the petitioner that requiring Class 9 air bag inflators, air bag modules, and seat-belt pretensioners to be subjected to the EX approval process is unnecessarily burdensome and that eliminating the approval requirement will not adversely affect safety. Further, PHMSA agrees that incorporating the terms of DOT–SP 12332 and DOT–SP 13996 into the HMR will promote compliance and safety. As a result, PHMSA proposes to revise § 173.166 to address the concerns highlighted in NAAHAC's petition. PHMSA believes changes proposed by this NPRM will promote the safe transportation of Class 9 air bag inflators, air bag modules, and seat-belt pretensioners, while significantly reducing the financial burden on the automotive industry for shipping these devices. The changes proposed by this NPRM are described in detail below.

A. Approval Process

In this NPRM, PHMSA proposes to allow manufacturers of air bag inflators, air bag modules, or seat-belt pretensioners to receive a classification of Class 9 (UN3268) to new designs that pass Test series 6(c) of the UN Manual of Tests and Criteria—currently required by Special Provision 160. As proposed, an air bag inflator, air bag module, or seat-belt pretensioner may be classed as Class 9 (UN3268) if the air bag inflator, air bag module, or seat-belt pretensioner design is examined and successfully tested by a person or agency (authorized testing agency) who is authorized by the Associate Administrator to perform such examination and testing of explosives under 173.56(b)(1).

As proposed in this NPRM, persons who test and examine air bag inflators, air bag modules, or seat-belt pretensioners will be required to provide a detailed report on each tested design to the manufacturer. Key components of the report include a description of the design; explanation of the tests performed and results; and a recommended classification for tested designs. The manufacturer must retain the report for as long as the design is in production and for 15 years thereafter. Additionally, the manufacturer must make the report available to Department officials upon request. This record retention requirement ensures that a detailed test report of each air bag inflator, air bag module, or seat-belt pretensioner design is maintained and available for the useful life of the device. These records may be used to verify the accuracy and validity of the tests and classification recommendation.

In summary, the proposed amendment provides manufacturers of air bag inflators, air bag modules, or seat-belt pretensioners with the option to utilize new designs that are proven to meet the criteria of a Class 9 through established test criteria, without receiving an EX approval from PHMSA. The result is a significant cost savings and no change in the level of safety. Additionally, we propose to permit manufacturers to continue to receive EX approval by submitting their designs for examination and testing in accordance with § 173.56(b) if they so choose.

Air bag inflators, air bag modules, or seat-belt pretensioners that meet the criteria for a Division 1.4G explosive, (e.g., a device that fails Test series 6(c) of the UN Manual of Tests and Criteria, as provided by Special Provision 160) must continue to be approved by

PHMSA in accordance with the explosive examination, classification, and approval process in § 173.56(b).

B. Shipping Papers

PHMSA is proposing in this NPRM to except Class 9 air bag inflators, air bag modules, or seat-belt pretensioners assigned to UN3268 from the requirement to provide the EX number on the shipping paper. As suggested by NAAHAC, the documentation requirement imposes a cost burden, but does not provide a safety benefit.

C. Safety Restraint Systems Installed in Vehicles

In this NPRM, PHMSA proposes to clarify that a safety restraint device that is installed in a vehicle or vehicle component is not subject to the HMR. This change makes it clear that the exception will continue to apply to Class 9, UN3268 materials that are not approved by the Associate Administrator.

D. Packaging

In this NPRM, PHMSA is also proposing to authorize the use of non-DOT specification, reusable containers manufactured from high strength plastic, metal, or other suitable material, or other dedicated handling devices, for transportation of air bag inflators, air bag modules, and seat-belt pretensioners. This change would incorporate the provisions of Special Permit DOT–SP 13996 into the HMR. The special permit has been in effect since 2005, and has been utilized by 31 grantees with no known safety problems. A review of the Hazardous Materials Incident Data library did not reveal any incidents related to this special permit since the date of its issuance.

Special Permit DOT–SP 13996 allows the specified packaging to be used for transportation from the manufacturing facility to an intermediate handling location; from an intermediate handling location to the assembly facility; from the assembly facility to an intermediate handling location; from the intermediate handling location back to the manufacturing facility; or from the assembly facility directly to the manufacturer with no intermediate facility involved. As proposed in this NPRM, there would be no limit on the use of the authorized packaging to transportation between specific destinations. However, no modifications or changes may be made to the original package and the transportation must be made by private or contract carrier. By requiring no modifications to the original package, this will ensure that adequate packaging and handling considerations are maintained.

In this NPRM, PHMSA also proposes to authorize additional packaging alternatives for air bag inflators, air bag modules, and seat-belt pretensioners that have been removed from, or were intended to be used in, a motor vehicle that meets the requirements for use in the United States. The proposed change would incorporate the provisions of Special Permit DOT–SP 12332 into the HMR. The special permit has been in effect since 2000, and has been utilized by more than 2,100 grantees with no known safety problems. A review of the Hazardous Materials Incident Data library did not reveal any incidents related to this special permit since the date of its issuance. In accordance with the special permit, this additional packaging option would be limited to devices that are offered for transportation and transported domestically by highway.

E. Shipments for Recycling/Reuse

In this NPRM, we did not propose any changes to the requirements for shipping air bag modules or seat-belt pretensioners for recycling. In the current HMR, when offered for domestic transportation by highway, rail freight, cargo vessel or cargo aircraft, a serviceable air bag module or seat-belt pretensioner removed from a motor vehicle that was manufactured as required for use in the U.S. may be offered for transportation and transported without compliance with the shipping paper requirement prescribed in § 173.166(c), but the word ''Recycled'' must be entered on the shipping paper immediately after the basic description prescribed in § 172.202. However, we believe that the word ''Reuse'' might be a more appropriate description for the actual action that is taking place. We request comments regarding a potential change from the word ''Recycled'' to ''Reuse'' that would appear on shipping papers in accordance with an altered § 173.166(d)(4).

F. Additional Packaging Authorizations

To maintain alignment of the HMR with international requirements, in this NPRM, we are proposing to incorporate changes based on the Seventeenth revised edition of the UN Model Regulations. Specifically, in addition to the packagings authorized currently in § 173.166(e)(1), (e)(2), and (e)(3), we propose to permit 1N2 and 1D drums, 3B2 jerricans, and 4A, 4B, 4N, and 4H1 boxes.

III. Regulatory Analyses and Notices

A. Statutory/Legal Authority for This Rulemaking

This notice of proposed rulemaking is published under the authority of 49 U.S.C. 5103(b) which authorizes the Secretary to prescribe regulations for the safe transportation, including security, of hazardous material in intrastate, interstate, and foreign commerce. 49 U.S.C. 5117(a) authorizes the Secretary of Transportation to issue a special permit from a regulation prescribed in 5103(b), 5104, 5110, or 5112 of the Federal Hazardous Materials Transportation Law to a person transporting, or causing to be transported, hazardous material in a way that achieves a safety level at least equal to the safety level required under the law, or consistent with the public interest, if a required safety level does not exist. If adopted as proposed, the final rule would amend the regulations incorporating a petition and provisions from certain widely-used and longstanding special permits that have established a history of safety and which may, therefore, be converted into the regulations for general use.

B. Executive Order 12866, Executive Order 13563, and DOT Regulatory Policies and Procedures

This notice of proposed rulemaking is not considered a significant regulatory action under section 3(f) of Executive Order 12866 and, therefore, was not reviewed by the Office of Management and Budget. Furthermore, this rule is not significant under the Regulatory Policies and Procedures of the Department of Transportation (44 *FR* 11034).

Executive Order 13563 is supplemental to and reaffirms the principles, structures, and definitions governing regulatory review that were established in Executive Order 12866 Regulatory Planning and Review of September 30, 1993. By building off of each other, these two Executive Orders 12866 and 13563 require agencies to regulate in the ''most cost-effective manner,'' to make a ''reasoned determination that the benefits of the intended regulation justify its costs,'' and to develop regulations that ''impose the least burden on society.''

In this NPRM, the proposed amendments to the HMR will not impose increased compliance costs on the regulated industry. Rather, the proposed rule incorporates current approval procedures for the transportation of air bag inflators, air bag modules, and seat-belt pretensioners into the HMR and provides additional

flexibility for persons seeking to obtain such approval. In addition, the proposals in this NPRM will reduce the paperwork burden on industry and this agency caused by continued renewals of special permits. The provisions of this proposed rule will promote the continued safe transportation of hazardous materials while reducing transportation costs for the industry and administrative costs for the agency. Therefore, the requirements of Executive Orders 12866 and 13563, and the DOT policies and procedures concerning these orders have been satisfied. Overall, this proposed rule should reduce the compliance burden on the regulated industry without compromising transportation safety.

C. Executive Order 13132

This proposed rule has been analyzed in accordance with the principles and criteria contained in Executive Order 13132 (''Federalism''). This proposed rule would preempt State, local, and Indian tribe requirements but does not propose any regulation that has substantial direct effects on the States, the relationship between the national government and the States, or the distribution of power and responsibilities among the various levels of government. Therefore, the consultation and funding requirements of Executive Order 13132 do not apply.

The Federal hazardous materials transportation law, 49 U.S.C. 5101–5127, contains an express preemption provision (49 U.S.C. 5125(b)) that preempts State, local, and Indian tribe requirements on the following subjects:

(1) The designation, description, and classification of hazardous materials;

(2) The packing, repacking, handling, labeling, marking, and placarding of hazardous materials;

(3) The preparation, execution, and use of shipping documents related to hazardous materials and requirements related to the number, contents, and placement of those documents;

(4) The written notification, recording, and reporting of the unintentional release in transportation of hazardous material; and

(5) The design, manufacture, fabrication, marking, maintenance, recondition, repair, or testing of a packaging or container represented, marked, certified, or sold as qualified for use in transporting hazardous material.

This proposed rule addresses subject areas (1), (3), and (5), above. If adopted as final, this rule would preempt any State, local, or Indian tribe requirements concerning these subjects unless the non-Federal requirements are ''substantively the same'' as the Federal requirements. Furthermore, this proposed rule is necessary to update, clarify, and provide relief from regulatory requirements.

Federal hazardous materials transportation law provides at § 5125(b)(2) that, if DOT issues a regulation concerning any of the covered subjects, DOT must determine and publish in the **Federal Register** the effective date of Federal preemption. The effective date may not be earlier than the 90th day following the date of issuance of the final rule and not later than two years after the date of issuance. PHMSA has determined that the effective date of Federal preemption for these requirements will be one year from the date of publication of a final rule in the **Federal Register.**

D. Executive Order 13175

This NPRM has been analyzed in accordance with the principles and criteria contained in Executive Order 13175 (''Consultation and Coordination with Indian Tribal Governments''). Because this NPRM does not significantly or uniquely affect the communities of the Indian tribal governments and does not impose substantial direct compliance costs, the funding and consultation requirements of Executive Order 13175 do not apply.

E. Regulatory Flexibility Act, Executive Order 13272, and DOT Procedures and Policies

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires an agency to review regulations to assess their impact on small entities unless the agency determines that a rule is not expected to have a significant impact on a substantial number of small entities. The proposed rule will not impose increased compliance costs on the regulated industry. Rather, the proposed rule incorporates current approval procedures for the transportation of air bag inflators, air bag modules, and seat-belt pretensioners into the HMR and provides additional flexibility for persons seeking to obtain such approval. In addition, the proposed rulemaking excepts certain shipments from the specific documentation requirements of the HMR; these exception provisions will increase shipping options and reduce shipment costs. Overall, this proposed rule should reduce the compliance burden on the regulated industry without compromising transportation safety. Therefore, we certify that this proposed rulemaking will not have a significant or negative economic impact on a substantial number of small entities, and in reality should provide a slight positive economic benefit (i.e., reduced compliance burden) for those small entities.

This notice has been developed in accordance with Executive Order 13272 (''Proper Consideration of Small Entities in Agency Rulemaking'') and DOT's procedures and policies to promote compliance with the Regulatory Flexibility Act to ensure that potential impacts of draft rules on small entities are properly considered.

F. Paperwork Reduction Act

PHMSA currently has an approved information collection under Office of Management and Budget (OMB) Control Number 2137–0051, entitled ''Rulemaking, Special Permits, and Preemption Requirements,'' with an expiration date of April 30, 2014. This NPRM may result in a decrease in the annual burden and costs under OMB Control Number 2137–0051 due to proposed changes to incorporate provisions contained in certain widely-used or longstanding special permits that have an established safety record.

PHMSA also has an approved information collection under OMB Control Number 2137–0557, entitled ''Approvals for Hazardous Materials,'' with an expiration date of May 31, 2014. While this NPRM may result in a slight increase in the annual burden and cost to OMB Control Number 2137–0557 for proposed minor recordkeeping requirements under § 173.166, this NPRM should result in an overall decrease in the annual burden and cost to OMB Control Number 2137–0557 due to the larger cost savings of reducing the number of approvals required by testers of air bags and air bag modules.

PHMSA has an approved information collection under OMB Control Number 2137–0034, entitled ''Hazardous Materials Shipping Papers and Emergency Response.'' This NPRM may result in a decrease in the annual burden and cost due to shippers no longer being required to put the EX numbers on shipping papers for air bag modules.

Under the Paperwork Reduction Act of 1995, no person is required to respond to an information collection unless it has been approved by OMB and displays a valid OMB control number. Section 1320.8(d), title 5, Code of Federal Regulations requires that PHMSA provide interested members of the public and affected agencies an opportunity to comment on information and recordkeeping requests.

This notice identifies revised information collection requests that PHMSA will submit to OMB for

approval based on the requirements in this proposed rule. PHMSA has developed burden estimates to reflect changes in this proposed rule and estimates that the information collection and recordkeeping burdens would be revised as follows:

OMB Control No. 2137–0051:
Decrease in Annual Number of Respondents: 45
Decrease in Annual Responses: 45
Decrease in Annual Burden Hours: 360
Decrease in Annual Burden Costs: $18,000.00

OMB Control No. 2137–0557:
Decrease in Annual Number of Respondents: 207
Decrease in Annual Responses: 207
Decrease in Annual Burden Hours: 569.25
Decrease in Annual Burden Costs: $11,385.00

OMB Control No. 2137–0034:
Decrease in Annual Number of Respondents: 207
Decrease in Annual Responses: 15,500
Decrease in Annual Burden Hours: 285.33
Decrease in Annual Burden Costs: $5,706.60

PHMSA specifically requests comments on the information collection and recordkeeping burdens associated with developing, implementing, and maintaining these requirements for approval under this proposed rule.

Requests for a copy of this information collection should be directed to Steven Andrews or T. Glenn Foster, Office of Hazardous Materials Standards (PHH–12), Pipeline and Hazardous Materials Safety Administration, 1200 New Jersey Avenue SE, Washington, DC 20590–0001, Telephone (202) 366–8553.

Address written comments to the Dockets Unit as identified in the **ADDRESSES** section of this rulemaking. We must receive comments regarding information collection burdens prior to the close of the comment period identified in the **DATES** section of this rulemaking. In addition, you may submit comments specifically related to the information collection burden to the PHMSA Desk Officer, Office of Management and Budget, at fax number (202) 395–6974.

G. Regulation Identifier Number (RIN)

A regulation identifier number (RIN) is assigned to each regulatory action listed in the Unified Agenda of Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. The RIN contained in the heading of this document can be used to cross-reference this action with the Unified Agenda.

H. Unfunded Mandates Reform Act of 1995

This proposed rule does not impose unfunded mandates under the Unfunded Mandates Reform Act of 1995. It does not result in costs of $141.3 million or more to either state, local or tribal governments, in the aggregate, or to the private sector, and is the least burdensome alternative that achieves the objective of the rule.

I. Environmental Assessment

The National Environmental Policy Act of 1969 (NEPA), as amended (42 U.S.C. 4321–4347), and implementing regulations by the Council on Environmental Quality (40 CFR part 1500) require Federal agencies to consider the consequences of Federal actions and prepare a detailed statement on actions that significantly affect the quality of the human environment.

The hazardous materials regulatory system is a risk management system that is prevention oriented and focused on identifying a hazard and reducing the probability and quantity of a hazardous materials release. Hazardous materials are categorized by hazard analysis and experience into hazard classes and packing groups. The regulations require each shipper to classify a material in accordance with these hazard classes and packing groups; the process of classifying a hazardous material is itself a form of hazard analysis. Further, the regulations require the shipper to communicate the material's hazards by identifying the hazard class, packing group, and proper shipping name on shipping papers and with labels on packages and placards on transport vehicles. Thus, the shipping paper, labels, and placards communicate the most significant findings of the shipper's hazard analysis. Most hazardous materials are assigned to one of three packing groups based upon its degree of hazard, from a high hazard Packing Group I material to a low hazard Packing Group III material. The quality, damage resistance, and performance standards for the packagings authorized for the hazardous materials in each packing group are appropriate for the hazards of the material transported.

Hazardous materials are transported by aircraft, vessel, rail, and highway. The potential for environmental damage or contamination exists when packages of hazardous materials are involved in transportation incidents. The need for hazardous materials to support essential services means transportation of highly hazardous materials is unavoidable. However, these shipments frequently move through densely populated or environmentally sensitive areas where the consequences of an incident could be loss of life, serious injury, or significant environmental damage. The ecosystems that could be affected by a hazardous materials release during transportation include atmospheric, aquatic, terrestrial, and vegetal resources (for example, wildlife habitats). The adverse environmental impacts associated with releases of most hazardous materials are short-term impacts that can be greatly reduced or eliminated through prompt clean-up of the incident scene. In this NPRM, we are requesting comments on the potential environmental impacts of the proposals.

In this NPRM, PHMSA proposes to incorporate the terms of two special permits into the HMR. Further, all of the proposals in this NPRM involve the transportation of air bag inflators, air bag modules, or seat-belt pretensioners that have been classed as UN3268, miscellaneous hazardous materials (Class 9). While this classification indicates that the material presents a hazard during transportation (but which does not meet the definition of any other hazard class in the HMR), a Class 9 material ranks last in all items regulated by the U.S. DOT in terms of hazard precedence and risk. The proposals in this NPRM reflect that fact and if finalized, would reduce the unnecessary burdens on not just the offerors of these UN3268 materials, but reduce PHMSA's own administrative costs from reviewing unnecessary approvals and special permits.

The purpose and need of this rulemaking is to incorporate widely-used special permits or those with an established safety record into the HMR for universal use. More information about the advantages of the proposed action can be found in the preamble (i.e., Summary Review of Proposed Amendments) to this rulemaking. The alternatives considered in the analysis include: (1) The proposed action, that is, incorporation of the proposed special permits as amendments to the HMR; and (2) the ''no action'' alternative, meaning that none of the proposed special permits would be incorporated into the HMR. PHMSA believes that either of these alternatives would result in equal environmental risk and/or impact because special permits are intended to offer equivalent safety and environmental protection as the HMR.

In considering the potential environmental impacts of the proposed

action, PHMSA does not anticipate that the incorporation of the listed special permits will result in any significant impact on the human environment because the process through which special permits are issued requires the applicant to demonstrate that the alternative transportation method or packaging proposed provides an equivalent level of safety as that provided in the HMR. However, PHMSA welcomes and will consider and address comments about foreseeable environmental impacts or risk associated with the incorporation of any proposed special permit that commenters believe PHMSA might have overlooked in this NPRM.

Given that this rulemaking proposes to amend the HMR to incorporate provisions contained in certain widely-used or longstanding special permits that have an established safety record, these proposed changes in regulation should increase safety and environmental protections.

J. International Trade Analysis

The Trade Agreements Act of 1979 (Pub. L. 96–39), as amended by the Uruguay Round Agreements Act (Pub. L. 103–465), prohibits Federal agencies from establishing any standards or engaging in related activities that create unnecessary obstacles to the foreign commerce of the United States. Pursuant to these Acts, the establishment of standards is not considered an unnecessary obstacle to the foreign commerce of the United States, so long as the standards have a legitimate domestic objective, such as the protection of safety, and do not operate in a manner that excludes imports that meet this objective. The statute also requires consideration of international standards and, where appropriate, that they be the basis for U.S. standards. PHMSA notes the purpose is to ensure the safety of the American public, and has assessed the effects of this rule to ensure that it does not exclude imports that meet this objective. As a result, this proposed rule is not considered as creating an unnecessary obstacle to foreign commerce.

IV. List of Subjects in 49 CFR Part 173

Hazardous materials transportation, Packaging and containers, Radioactive materials, Reporting and recordkeeping requirements, and Uranium.

In consideration of the foregoing, we propose to amend 49 CFR Chapter I as follows:

PART 173—SHIPPERS—GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS

1. The authority citation for part 173 continues to read as follows:

Authority: 49 U.S.C. 5101–5128, 44701; 49 CFR 1.45, 1.53.

2. Section 173.166 is proposed to be revised as follows:

§ 173.166 Air bag inflators, air bag modules and seat-belt pretensioners.

(a) *Definitions.* An *air bag inflator* (consisting of a casing containing an igniter, a booster material, a gas generant and, in some cases, a pressure receptacle (cylinder)) is a gas generator used to inflate an air bag in a supplemental restraint system in a motor vehicle. An *air bag module* is the air bag inflator plus an inflatable bag assembly. A *seat-belt pre-tensioner* contains similar hazardous materials and is used in the operation of a seat-belt restraining system in a motor vehicle.

(b) *Classification.* (1) An air bag inflator, air bag module, or seat-belt pretensioner may be classed as Class 9 (UN3268) if the air bag inflator, air bag module, or seat-belt pretensioner design is examined and successfully tested by a person or agency (authorized testing agency) who is authorized by the Associate Administrator to perform such examination and testing of explosives under 173.56(b)(1) of this subchapter, and who:

(i) Does not manufacture or market explosives, air bag inflators, air bag modules, or seat-belt pretensioners, is not owned in whole or in part, or is not financially dependent upon any entity that manufactures or markets explosives, air bag inflators, air bag modules, or seat-belt pretensioners;

(ii) Performs all examination and testing in accordance with the applicable requirements as specified in Special Provision 160 (see § 172.102); and

(iii) Maintains records in accordance with paragraph (g) of this section.

(iv) By adhering to all the provisions specified in § 173.166(b)(1), the Class 9 (UN3268) air bag inflator, air bag module, or seat-belt pretensioner design is not required to be submitted to the Associate Administrator for approval or assigned an EX number.

(2) An air bag inflator, air bag module, or seat-belt pretensioner may be classed as Division 1.4G if it has been examined and successfully tested by a person or agency (authorized testing agency) who is authorized by the Associate Administrator to perform such examination and testing of explosives under 173.56 of this subchapter. For domestic transport, air bag inflators, air bag modules or seat-belt pretensioners that meet the criteria for a Division 1.4G explosive must be transported using the description, ''UN0431, Articles, pyrotechnic *for technical purposes''* as specified in Special Provision 161 (see § 172.102). Further, as a Class 1 explosive, the manufacturer must submit to the Associate Administrator a report of the examination and assignment of a recommended shipping description, division, and compatibility group and if the Associate Administrator finds the approval request meets the regulatory criteria, the explosive will be approved in writing and assigned an EX number; or

(3) The manufacturer has submitted an application, including a classification issued by the competent authority of a foreign government to the Associate Administrator, and received written notification from the Associate Administrator that the device has been approved for transportation and assigned an EX number.

(c) *EX numbers.* (1) When an air bag inflator, air bag module, or seat-belt pretensioner is classed as a Division 1.4G, the packaging is subject to the EX number marking requirements in § 172.320 (or the shipping paper requirements in § 172.202(a)). For shipping papers, the EX number or product code for each approved inflator, module or pretensioner must be listed in association with the basic description required by § 172.202(a) of this subchapter. Product codes must be traceable to the specific EX number assigned to the inflator, module or pretensioner by the Associate Administrator. The EX number or product code is not required to be marked on the outside package.

(2) An air bag inflator, air bag module, or seat-belt pretensioner when classed as a Class 9 (UN3268), is excepted from the EX number requirements of paragraph (c).

(d) *Exceptions.* (1) An air bag module or seat-belt pretensioner that is classed as a Class 9 (UN3268) and is installed in a motor vehicle, aircraft, boat or other transport conveyance or its completed components, such as steering columns or door panels, is not subject to the requirements of this subchapter. An air bag module or seat-belt pretensioner that has been classed as a Division 1.4G and approved by the Associate Administrator and is installed in a motor vehicle, aircraft, boat or other transport conveyance or its completed components, such as steering columns or door panels, is not subject to the requirements of this subchapter.

(2) An air bag module containing an inflator that has been previously approved by the Associate Administrator for transportation is not required to be submitted for further examination or approval.

(3) An air bag module containing an inflator that has previously been approved by the Associate Administrator as a Division 2.2 material is not required to be submitted for further examination to be reclassed as a Class 9 material.

(4) *Shipments for Recycling.* When offered for domestic transportation by highway, rail freight, cargo vessel or cargo aircraft, a serviceable air bag module or seat-belt pretensioner removed from a motor vehicle that was manufactured as required for use in the United States may be offered for transportation and transported without compliance with the shipping paper requirement prescribed in paragraph (c) of this section. However, the word ''Recycled'' must be entered on the shipping paper immediately after the basic description prescribed in § 172.202 of this subchapter. No more than one device is authorized in the packaging prescribed in paragraph (e)(1), (2) or (3) of this section. The device must be cushioned and secured within the package to prevent movement during transportation.

(e) *Packagings.* Rigid, outer packagings, meeting the general packaging requirements of part 173, and the packaging specification and performance requirements of part 178 of this subchapter at the Packing Group III performance level are authorized as follows. The packagings must be designed and constructed to prevent movement of the articles and inadvertent operation. Further, if the Class 9 designation is contingent upon packaging specified by the authorized testing agency, shipments of the air bag inflator, air bag module, or seat-belt pretensioner must be in full compliance with the prescribed packaging.

(1) 1A2, 1B2, 1N2, 1D, 1G, or 1H2 drums.

(2) 3A2, 3B2, or 3H2 jerricans.

(3) 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, or 4H2 boxes.

(4) *Reusable High-Strength Containers or Dedicated Handling Devices.* (i) Reusable containers manufactured from high-strength plastic, metal, or other suitable material, or other dedicated handling devices are authorized for shipment of air bag inflators, air bag modules, and seat-belt pretensioners from a manufacturing facility to the assembly facility, subject to the following conditions:

(A) The gross weight of the containers or handling devices may not exceed 1000 kg (2205 pounds). Containers or handling devices must provide adequate support to allow stacking at least three units high with no resultant damage;

(B) If not completely enclosed by design, the container or handling device must be covered with plastic, fiberboard, metal, or other suitable material. The covering must be secured to the container by banding or other comparable methods; and

(C) Internal dunnage must be sufficient to prevent movement of the devices within the container.

(ii) Reusable containers manufactured from high-strength plastic, metal, or other suitable material, or other dedicated handling devices are authorized for shipment of air bag inflators, air bag modules, and seat-belt pretensioners to, between, and from, intermediate handling locations, provided they meet the conditions specified in paragraph (e)(4)(i)(A)–(C) of this section and:

(A) No modifications or changes are made to the packagings; and

(B) Transportation must be made by private or contract carrier.

(5) Packagings which were previously authorized in an approval issued by the Associate Administrator may continue to be used until January 1, 2018, provided a copy of the approval is maintained while such packaging is being used.

(6) *Devices removed from a vehicle.* When removed from, or were intended to be used in, a motor vehicle that was manufactured as required for use in the United States and offered for domestic transportation by highway, a serviceable air bag inflator, air bag module, or seat-belt pretensioner may be offered for transportation and transported in the following additional packaging:

(i) Specification and non-specification steel drums with a wall and lid thickness not less than 20 gauge. The lid must be securely affixed with a lever-locking or bolted-ring assembly. The lid of the drum must provide ventilation of the drum contents in a fire. The drum may be filled with any combination of air bag inflators, air bag modules, or seat-belt pretensioner devices to a capacity not greater than fifty (50) percent of the drum's total volume. In addition, inner packagings are not required; or

(ii) Outer packaging consisting of 4H2 solid plastic boxes or non-specification rugged reusable plastic outer packaging and inner static-resistant plastic bags or trays, as appropriate. If not completely enclosed by design, the container or handling device must be covered with plastic, fiberboard, metal or other suitable material. The covering must be secured to the container by banding or other comparable methods. The articles must be packed to prevent movement within the container during transportation.

(f) *Labeling.* Notwithstanding the provisions of § 172.402 of this subchapter, each package or handling device must display a CLASS 9 label. Additional labeling is not required when the package contains no hazardous materials other than the devices.

(g) *Recordkeeping requirements.* (1) Following the examination of each new design type classed as a Class 9 in accordance with paragraph (b)(1) of this section, the person that conducted the examination must prepare a test report and provide the test report to the manufacturer of the air bag inflator, air bag module, or seat-belt pretensioner. At a minimum, the test report must contain the following information:

(i) Name and address of the test facility;

(ii) Name and address of the applicant;

(iii) Manufacturer of the device. For a foreign manufacturer, the U.S. agent or importer must be identified;

(iv) A test report number, drawing of the device, and description of the air bag inflator, air bag module, or seat-belt pretensioner in sufficient detail to ensure that the test report is traceable (e.g. a unique product identifier) to a specific inflator design;

(v) The tests conducted and the results; and

(vi) A certification that the air bag inflator, air bag module, or seat-belt pretensioner is properly classed as a Class 9 (UN3268).

(2) For as long as any air bag inflator, air bag module, or seat-belt pretensioner design is being manufactured, and for at least fifteen (15) years thereafter, a copy of each test report must be maintained by the authorized testing agency that performed the examination and testing, and by the manufacturer of the product.

(3) Test reports must be made available to a representative of the Department upon request.

Issued in Washington, DC, on March 20, 2012 under authority delegated in 49 CFR part 106.

Magdy El-Sibaie,

Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Materials Safety Administration.

[FR Doc. 2012–7169 Filed 3–23–12; 8:45 am]

BILLING CODE 4910–60–P

Notices

Federal Register
Vol. 77, No. 58
Monday, March 26, 2012

This section of the FEDERAL REGISTER contains documents other than rules or proposed rules that are applicable to the public. Notices of hearings and investigations, committee meetings, agency decisions and rulings, delegations of authority, filing of petitions and applications and agency statements of organization and functions are examples of documents appearing in this section.

DEPARTMENT OF AGRICULTURE

Submission for OMB Review; Comment Request

March 21, 2012.

The Department of Agriculture has submitted the following information collection requirement(s) to OMB for review and clearance under the Paperwork Reduction Act of 1995, Public Law 104–13. Comments regarding (a) whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (b) the accuracy of the agency's estimate of burden including the validity of the methodology and assumptions used; (c) ways to enhance the quality, utility and clarity of the information to be collected; (d) ways to minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology should be addressed to: Desk Officer for Agriculture, Office of Information and Regulatory Affairs, Office of Management and Budget (OMB), *OIRA_Submission@OMB.EOP.GOV* or fax (202) 395–5806 and to Departmental Clearance Office, USDA, OCIO, Mail Stop 7602, Washington, DC 20250–7602. Comments regarding these information collections are best assured of having their full effect if received within 30 days of this notification. Copies of the submission(s) may be obtained by calling (202) 720–8681.

An agency may not conduct or sponsor a collection of information unless the collection of information displays a currently valid OMB control number and the agency informs potential persons who are to respond to the collection of information that such persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.

Risk Management Agency

Title: Multiple Peril Crop Insurance.

OMB Control Number: 0563–0053.

Summary of Collection: Previous amendments to the Federal Crop Insurance Act expanded the role of the crop insurance program to be the principal tool for risk management by producers of farm products and provided that crop insurance program operate on an actuarially sound basis, provided for independent review of crop insurance products by person experienced as actuaries and in underwriting, and required that the crop insurance program operate on an actuarially sound basis. To meet these goals, existing crop programs must be improved and expanded, new crop products developed, and new insurance concepts studied for possible implementation. Federal Crop Insurance Corporation (FCIC) offers a Standard Reinsurance Agreement to eligible crop insurance companies under which FCIC will use data elements instead of standards forms.

Need and Use of the Information: FCIC requires crop acreage information to be submitted to the insurance agent by each producer on or before a specific date. The basic provision covers information such as the name of the crop, the number of timely planted acres, person sharing in the crop, location of the acreage, etc. This information is used to determine liability, premium and subsidy. Federal agencies, Risk Management Agency, crop insurance companies that are reinsured by FCIC, and other agencies that require such information in the performance of their duties may use this information. If the information were not collected by specified dates, the producers may not have insurance coverage or the amount of insurance may be reduced and the crop insurance program would not be administered in an actuarially sound manner.

Description of Respondents: Farms; Business or other for-profit.

Number of Respondents: 556,408.

Frequency of Responses: Recordkeeping; Reporting: Quarterly; Weekly; Semi-annually; Monthly; Annually.

Total Burden Hours: 7,963,982.

Charlene Parker,

Departmental Information Clearance Officer.

[FR Doc. 2012–7191 Filed 3–23–12; 8:45 am]

BILLING CODE 3410–08–P

DEPARTMENT OF AGRICULTURE

Forest Service

Black Hills National Forest Advisory Board

AGENCY: Forest Service, USDA.

ACTION: Revised notice of intent to call for nominations for membership to the Black Hills National Forest Advisory Board.

SUMMARY: The U.S. Department of Agriculture, Forest Service has re-established the Black Hills National Forest Advisory Board (Board). The purpose is to obtain advice and recommendations on a broad range of forest issues such as forest plan revisions or amendments, forest health including fire management and mountain pine beetle infestations, travel management, forest monitoring and evaluation, recreation fees, and site-specific projects having forest wide implications. In an earlier notice, the Forest Service indicated it was seeking nominations for individuals to be considered as committee members, and the public was invited to submit nominations for membership. That notice, ''Notice of intent to re-establish the Black Hills National Forest Advisory Board and call for nominations,'' was published in the **Federal Register**, Volume 77, No. 30, page 8214, on Tuesday, February 14, 2012 and indicated that nominations and applications to the Board must be received by March 15, 2012. This revised notice extends the deadline for nominations and applications to April 30, 2012.

DATES: Written nominations must be received by April 30, 2012. Instructions for submitting a nomination package may be found in the section below entitled, ''Advisory Committee Organization''.

ADDRESSES: Send nominations and applications to Craig Bobzien, Forest Supervisor, Black Hills National Forest, 1019 North 5th Street, Custer, SD 57730.

FOR FURTHER INFORMATION CONTACT: Marie Curtin, Planning and Public Affairs, USDA, Forest Service, Black Hills National Forest, telephone: 605–673–9324, fax: 605–673–9208, or email: *mcurtin@fs.fed.us*. Individuals who use telecommunication devices for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339 between 8 a.m. and 8 p.m., Eastern Standard Time, Monday through Friday.

SUPPLEMENTARY INFORMATION: USDA 16565–Black Hills National Forest Advisory Board is a non-scientific program advisory Board established by the Secretary of Agriculture in 2003 to provide advice and counsel to the U. S. Forest Service, Black Hills National Forest, in the wake of increasingly severe and intense wild fires and mountain pine beetle epidemics.

The purpose of the Board is to provide advice and recommendations on a broad range of forest issues such as forest plan revisions or amendments, travel management, forest monitoring and evaluation, and site-specific projects having forest-wide implications. The Board also serves to meet the needs of the Recreation Enhancement Act of 2005 as a recreation resource advisory board (RRAC) for the Black Hills of South Dakota. The Board provides timely advice and recommendations to the regional forester through the forest supervisor regarding programmatic forest issues and project-level issues that have forest-wide implications for the Black Hills National Forest.

The Board meets approximately ten times a year, with one month being a field trip, held in August and focusing on both current issues and the educational value of seeing management strategies and outcomes on the ground. This Board has been established as a truly credible entity and a trusted voice on forest management issues and is doing often astonishing work in helping to develop informed consent for forest management.

For years, the demands made on the Black Hills National Forest have resulted in conflicts among interest groups resulting in both forest-wide and site-specific programs being delayed due to appeals and litigation. The Board provides a forum to resolve these issues to allow for the Black Hills National Forest to move forward in its management activities. The Board is believed to be one of the few groups with broad enough scope to address all of the issues and include all of the jurisdictional boundaries.

Significant Contributions

The Board's most significant accomplishments include:

1. A 2004 report on the Black Hills Fuels Reduction Plan, a priority following the major fires including the 86,000 acre Jasper Fire in 2000;

2. A 2004 initial Off-Highway Vehicle Travel Management Subcommittee report;

3. A report on their findings regarding the thesis, direction, and assumptions of Phase II of our Forest Plan produced in 2005;

4. The Invasive Species Subcommittee Report in 2005 covering recommendations to better stop invasive species from infiltrating the Forest;

5. A final Travel Management Subcommittee Report in 2006 in which the Board made 11 recommendations regarding characteristics of a designated motor vehicle trail system, the basis for our initial work to prepare our Motor Vehicle Use Map in 2010–2011;

6. The Board's annual work to attract funding through grants based on the Collaborative Landscape Forest Restoration Program (CFLRP), a program of the Secretary of Agriculture CFLR Program to encourage the collaborative, science-based ecosystem restoration of priority forest landscapes;

7. A letter to the Secretary and the Chief of the Forest Service to work, restore and maintain open space for wildlife habitat and recreation needs like snowmobile trails; and

8. The annual reports to the Secretary detailing the Board's activities, issues, and accomplishments.

The Board is deemed to be among the most effective public involvement strategies in the Forest Service and continues to lead by example for Federal, State, and local government agencies working to coordinate and cooperate in the Black Hills of South Dakota and Wyoming.

Background

Pursuant to the Federal Advisory Committee Act (5 U.S.C. App. II), notice is hereby given that the Secretary of Agriculture intends to calls for nominations for membership to the Black Hills National Forest Advisory Board. The Board provides advice and recommendations on a broad range of forest planning issues and, in accordance with the Federal Lands Recreation Enhancement Act (Pub. L. 108–447 (REA)), more specifically will provide advice and recommendations on Black Hills National Forest recreation fee issues (serving as the RRAC for the Black Hills National Forest). The Board membership consists of individuals representing commodity interests, amenity interests, and State and local government.

The Board has been determined to be in the public interest in connection with the duties and responsibilities of the Black Hills National Forest. National forest management requires improved coordination among the interests and governmental entities responsible for land management decisions and the public that the agency serves.

Advisory Committee Organization

The Board consists of 16 members that are representative of the following interests (this membership is similar to the membership outlined by the Secure Rural Schools and Community Self Determination Act for Resource Advisory Committees (16 U.S.C. 500, *et seq.*)):

1. Economic development;
2. Developed outdoor recreation, off-highway vehicle users, or commercial recreation;
3. Energy and mineral development;
4. Commercial timber industry;
5. Permittee (grazing or other land use within the Black Hills area);
6. Nationally recognized environmental organizations;
7. Regionally or locally recognized environmental organizations;
8. Dispersed recreation;
9. Archeology or history;
10. Nationally or regionally recognized sportsmen's groups, such as anglers or hunters;
11. South Dakota State-elected offices;
12. Wyoming State-elected offices;
13. South Dakota or Wyoming county- or local-elected officials;
14. Tribal government elected or-appointed officials;
15. South Dakota State natural resource agency official; and
16. Wyoming State natural resource agency official.

No individual who is currently registered as a Federal lobbyist is eligible to serve as a member of the Committee. The Committee will meet approximately nine times, and will attend at least one summer field tour as designated by the Designated Federal Officer (DFO).

The appointment of members to the Board will be made by the Secretary of Agriculture. Any individual or organization may nominate one or more qualified persons to serve on the Board. Individuals may also nominate themselves. To be considered for membership, nominees must submit a:

1. Resume describing qualifications for membership to the Committee;

2. Cover letter with rationale for serving on the committee and what you can contribute; and

3. Complete form AD–755, Advisory Committee Membership Background Information.

Letters of recommendations are welcome. The AD–755 may be obtained from Forest Service contact person or from the following Web site: *http://www.fsa.usda.gov/Internet/FSA_File/ad755.pdf*. All nominations will be vetted by USDA. The Secretary of Agriculture will appoint committee members to the Board from the list of qualified applicants.

The members of the Board will elect and determine the responsibilities of the Chairperson and the Vice-Chairperson. In absence of the Chairperson, the Vice-Chairperson will act in the Chairperson's stead. The Forest Supervisor of the Black Hills National Forest serves as the Designated Federal Official under sections 10(e) and (f) of the Federal Advisory Committee Act (5 U.S.C. App. II).

Members will serve without compensation, but may be reimbursed for travel expenses while performing duties on behalf of the Board, subject to approval by the DFO.

Equal opportunity practices are followed in all appointments to the Board in accordance with USDA policies. To ensure that the recommendations of the Board have been taken into account the needs of diverse groups, served by the Black Hills National Forest, membership shall include, to the extent practicable, individuals with demonstrated ability to represent minorities, women, and persons with disabilities.

Dated: March 19, 2012.

Craig Bobzien,

Forest Supervisor.

[FR Doc. 2012–7175 Filed 3–23–12; 8:45 am]

BILLING CODE 3410–11–P

DEPARTMENT OF AGRICULTURE

National Agricultural Statistics Service

Notice of Intent To Seek Approval To Revise and Extend a Currently Approved Information Collection

AGENCY: National Agricultural Statistics Service, USDA.

ACTION: Notice and request for comments.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995, this notice announces the intention of the National Agricultural Statistics Service (NASS) to request revision and extension of a currently approved information collection, the Agricultural Resources Management Survey and Chemical Use Surveys. A revision to burden hours will be needed due to changes in the size of the target population, sampling design, and/or questionnaire length.

DATES: Comments on this notice must be received by May 25, 2012 to be assured of consideration.

ADDRESSES: You may submit comments, identified by docket number 0535–0218, by any of the following methods:

- *Email: omboffi cer@nass.usda.gov.* Include docket number above in the subject line of the message.
- *Fax:* (202) 720–6396.
- *Mail:* Mail any paper, disk, or CD–ROM submissions to: David Hancock, NASS Clearance Officer, U.S. Department of Agriculture, Room 5336 South Building, 1400 Independence Avenue SW., Washington, DC 20250–2024.
- *Hand Delivery/Courier:* Hand deliver to: David Hancock, NASS Clearance Officer, U.S. Department of Agriculture, Room 5336 South Building, 1400 Independence Avenue SW., Washington, DC 20250–2024.

FOR FURTHER INFORMATION CONTACT: Joseph T. Reilly, Associate Administrator, National Agricultural Statistics Service, U.S. Department of Agriculture, (202) 720–4333.

SUPPLEMENTARY INFORMATION:

Title: Agricultural Resources Management Survey and Chemical Use Surveys.

OMB Control Number: 0535–0218.

Expiration Date of Current Approval: December 31, 2012.

Type of Request: Intent to revise and extend a currently approved information collection.

Abstract: The Agricultural Resource Management Surveys (ARMS) are the primary source of information for the U.S. Department of Agriculture on a broad range of issues related to: Production practices, costs and returns, pest management, chemical usage, and contractor expenses. Data is collected on both a whole farm level and on selected commodities.

ARMS is the only source of information available for objective evaluation of many critical issues related to agriculture and the rural economy, such as: Whole farm finance data, including data sufficient to construct estimates of income for farms by: type of operation, loan commodities, income for operator households, credit, structure, and organization; marketing information; and other economic data on input usage, production practices, and crop substitution possibilities.

Data from ARMS are used to produce estimates of net farm income by type of commercial producer as required in 7 U.S.C. 7998 and estimates of enterprise production costs as required in 7 U.S.C. 1441(a). Data from ARMS are also used as weights in the development of the Prices Paid Index, a component of the Parity Index referred to in the Agricultural Adjustment Act of 1938. These indexes are used to calculate the annual federal grazing fee rates as described in the Public Rangelands Improvement Act of 1978 and Executive Order 12548 and as promulgated in regulations found at 36 CFR 222.51.

In addition, ARMS is used to produce estimates of sector-wide production expenditures and other components of income that are used in constructing the estimates of income and value-added which are transmitted to the U.S. Department of Commerce, Bureau of Economic Analysis, by the USDA Economic Research Service (ERS) for use in constructing economy-wide estimates of Gross Domestic Product. This transmittal of data, prepared using the ARMS, is undertaken to satisfy a 1956 agreement between the Office of Management and Budget and the Departments of Agriculture and Commerce that a single set of estimates be published on farm income.

Chemical Use Surveys: Congress has mandated that NASS and ERS build nationally coordinated databases on agricultural chemical use and related farm practices; these databases are the primary vehicles used to produce specified environmental and economic estimates. The surveys will help provide the knowledge and technical means for producers and researchers to address on-farm environmental concerns in a manner that maintains agricultural productivity.

Authority: These data will be collected under the authority of 7 U.S.C. 2204(a). Individually identifiable data collected under this authority are governed by section 1770 of the Food Security Act of 1985, 7 U.S.C. 2276, which requires USDA to afford strict confidentiality to non-aggregated data provided by respondents. This Notice is submitted in accordance with the Paperwork Reduction Act of 1995 (at 44 U.S.C. 3501, *et seq.*) and Office of Management and Budget regulations at 5 CFR part 1320.

NASS also complies with OMB Implementation Guidance, ''Implementation Guidance for Title V of the E-Government Act, Confidential Information Protection and Statistical Efficiency Act of 2002 (CIPSEA),'' 72 FR 33362 (June 15, 2007).

Estimate of Burden: Public reporting burden for this collection of information

is estimated to average approximately 35–40 minutes per survey.

Respondents: Farmers, ranchers, farm managers, farm contractors, and farm households.

Estimated Number of Respondents: Approximately 80,000 respondents will be sampled each year. Over half of these respondents will be contacted more than one time in a single year.

Estimated Total Annual Burden on Respondents: Approximately 66,000 hours per year.

Copies of this information collection and related instructions can be obtained without charge from the NASS Clearance Officer, at (202) 690–2388 or at: *omboffi cer@nass.usda.gov.*

Comments: Comments are invited on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (b) the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on those who are to respond, through the use of appropriate automated, electronic, mechanical, technological or other forms of information technology collection methods. All responses to this notice will become a matter of public record and be summarized in the request for OMB approval.

Signed at Washington, DC, March 06, 2012.

Joseph T. Reilly,

Associate Administrator.

[FR Doc. 2012–7255 Filed 3–23–12; 8:45 am]

BILLING CODE 3410–20–P

DEPARTMENT OF AGRICULTURE

National Agricultural Statistics Service

Notice of Intent To Revise a Previously Approved Information Collection

AGENCY: National Agricultural Statistics Service, USDA.

ACTION: Notice and request for comments.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995, this notice announces the intent of the National Agricultural Statistics Service (NASS) to seek reinstatement of an information collection, the National Childhood Injury and Occupational Injury Survey of Farm Operators.

DATES: Comments on this notice must be received by May 25, 2012 to be assured of consideration.

ADDRESSES: You may submit comments, identified by docket number 0535–0235, by any of the following methods:

- *Email: omboffi cer@nass.usda.gov.* Include docket number above in the subject line of the message.
- *Fax:* (202) 720–6396.
- *Mail:* Mail any paper, disk, or CD–ROM submissions to: David Hancock, NASS Clearance Officer, U.S. Department of Agriculture, Room 5336 South Building, 1400 Independence Avenue SW., Washington, DC 20250–2024.
- *Hand Delivery/Courier:* Hand deliver to: David Hancock, NASS Clearance Officer, U.S. Department of Agriculture, Room 5336 South Building, 1400 Independence Avenue SW., Washington, DC 20250–2024.

FOR FURTHER INFORMATION CONTACT: Joseph T. Reilly, Associate Administrator, National Agricultural Statistics Service, U.S. Department of Agriculture, (202) 720–4333.

SUPPLEMENTARY INFORMATION:

Title: National Childhood Injury and Occupational Injury Survey of Farm Operators.

OMB Control Number: 0535–0235.

Expiration Date of Previous Approval: 12/31/2011.

Type of Request: To seek reinstatement of an information collection for a period of three years.

Abstract: The National Childhood Injury and Adult Occupational Injury Survey of Farm Operators is designed to: (1) Provide estimates of childhood nonfatal injury incidence and description of injury occurring to children less than 20 years of age who reside, work, or visit farms and (2) describe the occupational injury experience of farm operators. These surveys are being conducted as part of a cooperative agreement between the Center for Disease Control (CDC) and the National Agricultural Statistics Service (NASS). In 2012, NASS will conduct the General Adult and Child Injury survey and will use the total farm population to sample from. In 2013, NASS will not be conducting an injury survey, since we will be concentrating on the Census of Agriculture survey (OMB #0535–0226). In 2014, NASS plans to again conduct the General Adult and Child Injury Survey, and this time, the survey will concentrate on minority farm operators.

DATA COLLECTION FOR THE THREE YEAR APPROVAL PERIOD

Survey targeted group	Reference year	Survey year	Sample size
General Adult and Child Injury Survey Target Population—All Farm Operators)	2011	2012	50,000
No Survey Conducted this Year	2012	2013	0
General Adult and Child Injury Survey (Minority Farm Operators)	2013	2014	50,000

Data will be collected by telephone from all 50 states. Questions will relate to farm injuries occurring during the reference calendar year. These data will update and enhance existing data series used by the National Institute of Occupational Safety and Health (NIOSH) to: (1) Establish a measure of the number and rate of childhood injuries associated with farming operations and study the specific types of injuries sustained and (2) describe the scope and magnitude of occupational injuries associated with farming operations. The collection combines the youth and occupational injury studies to reduce the number of contacts on the targeted farm population. Reports will be generated and information disseminated to all interested parties concerning the findings from this study.

Authority: These data will be collected under the authority of 7 U.S.C. 2204(a). Individually identifiable data collected under this authority are governed by Section 1770 of the Food Security Act of 1985, 7 U.S.C. 2276, which requires USDA to afford strict confidentiality to non-aggregated data provided by respondents. This Notice is submitted in accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. 3501, *et seq.*) and Office of Management and Budget regulations at 5 CFR part 1320.

NASS also complies with OMB Implementation Guidance, ''Implementation Guidance for Title V of the E-Government Act, Confidential

Information Protection and Statistical Efficiency Act of 2002 (CIPSEA),'' 72 FR 33362 (June 15, 2007).

Estimate of Burden: Reporting burden for this collection of information is estimated to average 12 minutes per response; screen-outs will be allowed early in the interview process if no injuries were incurred in the reference year. Burden is based on a minimum response rate of 80%. NASS will be utilizing several pieces of publicity and informational materials to encourage respondents to participate in this important survey.

Respondents: Farm Operators.

Estimated Annual Number of Respondents: 33,500.

Estimated Total Annual Burden on Respondents: 10,500 hours.

Copies of this information collection and related instructions can be obtained without charge from David Hancock, NASS—OMB Clearance Officer, at (202) 690–2388 or at *ombofficer@nass.usda.gov*.

Comments: Comments are invited on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (b) the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, technological, or other forms of information technology collection methods. All responses to this notice will become a matter of public record and be summarized in the request for OMB approval.

Signed at Washington, DC, March 06, 2012.

Joseph T. Reilly,

Associate Administrator.

[FR Doc. 2012–7257 Filed 3–23–12; 8:45 am]

BILLING CODE 3410–20–P

DEPARTMENT OF COMMERCE

Submission for OMB Review; Comment Request

The Department of Commerce will submit to the Office of Management and Budget (OMB) for clearance the following proposal for collection of information under the provisions of the Paperwork Reduction Act (44 U.S.C. chapter 35).

Agency: Bureau of Industry and Security.

Title: Request for Investigation Under Section 232 of the Trade Expansion Act.

OMB Control Number: 0694–0120.

Form Number(s): N/A.

Type of Request: Regular.

Burden Hours: 3,000 hours.

Number of Respondents: 400 respondents.

Average Hours per Response: 7.5 hours per response.

Needs and Uses: Upon request, BIS will initiate an investigation to determine the effects of imports of specific commodities on the national security, and will make the findings known to the President for possible adjustments to imports through tariffs. The findings are made publicly available and are reported to Congress. The purpose of this collection is to account for the public burden associated with the surveys distributed to determine the impact on national security.

Affected Public: Businesses and other for-profit institutions.

Frequency: On occasion.

Respondent's Obligation: Required to obtain benefits.

OMB Desk Officer: Jasmeet Seehra, FAX number (202) 395–7285.

Copies of the above information collection proposal can be obtained by calling or writing Jennifer Jessup, Departmental Paperwork Clearance Officer, (202) 482–0336, Department of Commerce, Room 6616, 14th and Constitution Avenue NW., Washington, DC 20230 (or via the Internet at *jjessup@doc.gov*).

Written comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice to Jasmeet Seehra, Office of Management and Budget (OMB), by email to *jseehra@omb.eop.gov*, or by fax to (202) 395–7285.

Dated: March 20, 2012.

Glenna Mickelson,

Management Analyst, Office of the Chief Information Officer.

[FR Doc. 2012–7102 Filed 3–23–12; 8:45 am]

BILLING CODE 3510–33–P

DEPARTMENT OF COMMERCE

National Climate Assessment and Development Advisory Committee (NCADAC) Meeting

AGENCY: Office of Oceanic and Atmospheric Research (OAR), National Oceanic and Atmospheric Administration (NOAA), Department of Commerce (DOC).

ACTION: Notice of open public meeting.

SUMMARY: This notice sets forth the schedule and proposed agenda of a forthcoming meeting of the DoC NOAA National Climate Assessment and Development Advisory Committee (NCADAC).

DATE AND TIME: The meeting is scheduled for: Tuesday, April 10, 2012 from 2–4 p.m. Eastern Time.

ADDRESSES: Conference call. Public access will be available at the office of the U.S. Global Change Research Program, Conference Room A, Suite 250, 1717 Pennsylvania Avenue NW., Washington, DC 20006. Please check the National Climate Assessment Web site for additional information at *http://www.globalchange.gov/what-we-do/assessment*.

Matters To Be Considered

Please refer to the Web page *http://www.nesdis.noaa.gov/NCADAC/index.html* for the most up-to-date meeting agenda, when available.

Status: The meeting will be open to public participation with a 10-minute public comment period from 3:45–3:55 p.m. The NCADAC expects that public statements presented at its meetings will not be repetitive of previously submitted verbal or written statements. In general, each individual or group making a verbal presentation will be limited to a total time of two minutes. Written comments should be received in the NCADAC DFO's office by Tuesday, April 3, 2012, to provide sufficient time for NCADAC review. Written comments received by the NCADAC DFO after April 3, 2012, will be distributed to the NCADAC, but may not be reviewed prior to the meeting date.

FOR FURTHER INFORMATION CONTACT: Dr. Cynthia Decker, Designated Federal Official, National Climate Assessment and Development Advisory Board, NOAA, Rm. 11230, 1315 East-West Highway, Silver Spring, Maryland 20910. (Phone: 301–734–1156, Fax: 301–713–1459, Email: *Cynthia.decker@noaa.gov*). Individuals planning to attend are requested to RSVP to Dr. Decker by Tuesday, April 3, 2012 because space may be limited at the venue.

SUPPLEMENTARY INFORMATION: The National Climate Assessment and Development Advisory Committee was established in December 2010. The committee's mission is to synthesize and summarize the science and information pertaining to current and future impacts of climate change upon the United States; and to provide advice and recommendations toward the

development of an ongoing, sustainable national assessment of global change impacts and adaptation and mitigation strategies for the Nation. Within the scope of its mission, the committee's specific objective is to produce a National Climate Assessment.

Dated: March 20, 2012.

Terry Bevels,

Acting Chief Financial Officer/Chief Administrative Officer, Office of Oceanic and Atmospheric Research, National Oceanic and Atmospheric Administration.

[FR Doc. 2012–7253 Filed 3–23–12; 8:45 am]

BILLING CODE 3510–KD–P

DEPARTMENT OF COMMERCE

U.S. Census Bureau

Proposed Information Collection; Comment Request; Annual Survey of School System Finances (Formerly Named Annual Survey of Local Government Finances—School Systems)

AGENCY: U.S. Census Bureau, Commerce.

ACTION: Notice.

SUMMARY: The Department of Commerce, as part of its continuing effort to reduce paperwork and respondent burden, invites the general public and other Federal agencies to take this opportunity to comment on proposed and/or continuing information collections, as required by the Paperwork Reduction Act of 1995, Public Law 104–13 (44 U.S.C. 3506(c)(2)(A)).

DATES: To ensure consideration, written comments must be submitted on or before May 25, 2012.

ADDRESSES: Direct all written comments to Jennifer Jessup, Departmental Paperwork Clearance Officer, (202) 482–0336, Department of Commerce, Room 6616, 14th and Constitution Avenue NW., Washington, DC 20230 (or via the Internet at *jjessup@doc.gov*).

FOR FURTHER INFORMATION CONTACT: Requests for additional information or copies of the information collection instrument(s) and instructions should be directed to Jeremy Phillips, U.S. Census Bureau, Governments Division, 4600 Silver Hill Road, Washington, DC 20233–6800; (301) 763–5653.

SUPPLEMENTARY INFORMATION:

I. Abstract

The United States Census Bureau plans to request an extension to the current Office of Management and Budget clearance for the Annual Survey of School System Finances.

The Annual Survey of School System Finances is the only comprehensive source of public elementary-secondary school system finance data collected on a nationwide scale using uniform definitions, concepts, and procedures. The collection covers the revenues, expenditures, debt, and assets of all public elementary-secondary school systems. This data collection has been coordinated with the National Center for Education Statistics (NCES). The NCES uses this collection to satisfy its need for school finance data.

Fiscal data provided by respondents aid data users in measuring the effectiveness of resource allocation. The products of this data collection make it possible for data users to search a single database to obtain information on such things as per pupil expenditures and the percent of state, local, and federal funding for each school system. Elementary-secondary education related spending is the single largest financial activity of state and local governments. Education finance statistics provided by the Census Bureau allow for analyses of how public elementary-secondary school systems receive their funding and how they are spending their funds.

The forms and survey announcement used in the school finance portion of the survey are:

F–33 Survey Announcement. This letter is mailed electronically at the beginning of each survey period to solicit the assistance of the state education agencies. It establishes the conditions by which the state education agencies provide their school finance data to the Census Bureau.

Form F–33. This form contains item descriptions and definitions of the elementary-secondary education finance items collected jointly by the Census Bureau and NCES. It is used primarily as a worksheet and instruction guide by the state education agencies providing school finance data centrally for the school systems in their respective states. All states supply their data by electronic means. Revisions to this survey include the removal of the data item collecting Title V, Part A (Innovative Programs) revenue. (Funding for this federal program ended on September 30, 2009.) There may also be the removal of three data items collecting data for the American Recovery and Reinvestment Act funds. Once states are no longer able to collect or expend American Recovery and Reinvestment Act funds, those data items will be removed from the collection. The data items were added as non-substantial changes to the data collection after the previous OMB clearance, and collection began with fiscal year 2009 data.

Form F–33–L1. This is a supplemental form sent directly to school systems in states where the state education agencies cannot provide information on the assets of individual school systems. School systems have the choice to submit their data via paper, fax, or Internet.

Form F–33–L2. This is a supplemental form sent directly to school systems in states where the state education agency cannot provide information on the indebtedness of individual school systems. School systems have the choice to submit their data via paper, fax, or Internet.

Form F–33–L3. This is a supplemental form sent directly to school systems in states where the state education agency cannot provide information on both indebtedness and assets. This letter combines the items requested on the forms F–33–L1 and F–33–L2. School systems have the choice to submit their data via paper, fax, or Internet.

II. Method of Collection

The Census Bureau collects almost all of the finance data for local school systems from state education agency databases through central collection arrangements with the state education agencies. The states transfer most of this information in electronic format over the Internet via file transfer protocol. The Census Bureau has facilitated central collection of school system finance data by accepting data in multiple formats.

III. Data

OMB Control Number: 0607–0700.

Form Number: F–33, F–33–L1, F–33–L2 and F–33–L3.

Type of Review: Regular submission.

Affected Public: State and local governments.

Estimated Number of Respondents: 3,230.

Estimated Time per Response: 1.24 hours.

Estimated Total Annual Burden Hours: 3,990.

Estimated Total Annual Cost: $92,229.

Respondents Obligation: Voluntary.

Legal Authority: Title 13, U.S.C., Sections 161 and 182.

IV. Request for Comments

Comments are invited on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden (including hours and cost) of the proposed collection of information; (c)

ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology.

Comments submitted in response to this notice will be summarized and/or included in the request for OMB approval of this information collection; they also will become a matter of public record.

Dated: March 20, 2012.

Glenna Mickelson,

Management Analyst, Office of the Chief Information Officer.

[FR Doc. 2012–7118 Filed 3–23–12; 8:45 am]

BILLING CODE 3510–07–P

DEPARTMENT OF COMMERCE

Foreign-Trade Zones Board

[Docket 19–2012]

Foreign-Trade Zone 204—Tri-Cities Area, TN/VA; Application for Reorganization Under Alternative Site Framework

An application has been submitted to the Foreign-Trade Zones (FTZ) Board (the Board) by the Tri-Cities Airport Commission, grantee of FTZ 204, requesting authority to reorganize the zone under the alternative site framework (ASF) adopted by the Board (74 FR 1170, 1/12/09 (correction 74 FR 3987, 1/22/09); 75 FR 71069–71070, 11/22/10). The ASF is an option for grantees for the establishment or reorganization of general-purpose zones and can permit significantly greater flexibility in the designation of new ''usage-driven'' FTZ sites for operators/users located within a grantee's ''service area'' in the context of the Board's standard 2,000-acre activation limit for a general-purpose zone project. The application was submitted pursuant to the Foreign-Trade Zones Act, as amended (19 U.S.C. 81a–81u), and the regulations of the Board (15 CFR part 400). It was formally filed on March 20, 2012.

FTZ 204 was approved by the Board on October 18, 1994 (Board Order 706, 59 FR 54432, 10/31/94) and expanded on June 7, 2002 (Board Order 1233, 67 FR 41393–41394, 06/18/02) and on June 22, 2010 (Board Order 1691, 75 FR 38979–38980).

The current zone project includes the following sites: *Site 1* (977 acres, expires 6/30/15)—Tri-Cities Regional Airport complex, 2525 Highway 75, Blountville, Sullivan County, TN; *Site 2* (26 acres, expires 6/30/15)—Johnson City Chemical Company, 402 Steel Street, Johnson City, Washington County, TN; *Site 3* (330 acres, expires 6/30/15)—Northeast Tennessee Business Park, intersection of TN 357 and Highway 75, Kingsport, Sullivan County, TN; *Site 4* (129 acres, expires 6/30/15)—Bristol Tennessee Industrial Park, SR394, Bristol, Sullivan County, TN; *Site 5* (799 acres)—Tri-County Industrial Park, Industrial Park Road, Piney Flats, Sullivan County, TN; *Site 6* (206 acres, 6/30/15)—Regional Med-Tech Center, Med-Tech Parkway, Johnson City, Washington County, TN; *Site 7* (103 acres, expires 6/30/15)—Linden/Hairston Industrial Park, Linden Drive at Bonham Road, Bristol, Washington County, VA; *Site 8* (2,100 acres, expires 6/30/15)—Holston Business and Technology Park, 4509 West Stone Drive, Kingsport, Hawkins County, TN; *Site 9* (134 acres, expires 6/30/15)—Washington County Industrial Park, Cherry Hill Road, Johnson City, Washington County, TN; *Site 10* (113 acres, expires 8/31/12)—Oak Park Industrial Park, Westinghouse Road/Rt. 11, Washington County, VA; and, *Site 11* (226 acres, expires 6/30/17)—The Partnership Park II, 2504 Weaver Pike, Bristol, Sullivan County, TN.

The grantee's proposed service area under the ASF would be the Counties of Sullivan, Hawkins, Greene, Washington, Unicoi, Carter, Hamblen, and Johnson, Tennessee and the Counties of Buchanan, Dickenson, Wise, Lee, Russell, Scott and Washington, Virginia and the Cities of Norton and Bristol, Virginia as described in the application. If approved, the grantee would be able to serve sites throughout the service area based on companies' needs for FTZ designation. The proposed service area is within/adjacent to the Tri-Cities Customs and Border Protection port of entry.

The applicant is requesting authority to reorganize its existing zone project under the ASF as follows: Sites 1 through 11 would become magnet sites. The ASF allows for the possible exemption of one magnet site from the ''sunset'' time limits that generally apply to sites under the ASF, and the applicant proposes that proposed magnet Site 1 be so exempted. Because the ASF only pertains to establishing or reorganizing a general-purpose zone, the application would have no impact on FTZ 204's authorized subzone.

In accordance with the Board's regulations, Kathleen Boyce of the FTZ Staff is designated examiner to evaluate and analyze the facts and information presented in the application and case record and to report findings and recommendations to the Board.

Public comment is invited from interested parties. Submissions (original and 3 copies) shall be addressed to the Board's Executive Secretary at the address below. The closing period for their receipt is May 25, 2012. Rebuttal comments in response to material submitted during the foregoing period may be submitted during the subsequent 15-day period to June 11, 2012.

A copy of the application will be available for public inspection at the Office of the Executive Secretary, Foreign-Trade Zones Board, Room 2111, U.S. Department of Commerce, 1401 Constitution Avenue NW., Washington, DC 20230–0002, and in the ''Reading Room'' section of the Board's Web site, which is accessible via *www.trade.gov/ftz.* For further information, contact Kathleen Boyce at *Kathleen.Boyce@trade.gov* or (202) 482–1346.

Dated: March 20, 2012.

Andrew McGilvray,

Executive Secretary.

[FR Doc. 2012–7275 Filed 3–23–12; 8:45 am]

BILLING CODE P

DEPARTMENT OF COMMERCE

Foreign-Trade Zones Board

[Docket 20–2012]

Foreign-Trade Zone 151—Findlay, OH; Application for Reorganization Under Alternative Site Framework

An application has been submitted to the Foreign-Trade Zones (FTZ) Board (the Board) by the Findlay/Hancock County Chamber of Commerce, grantee of FTZ 151, requesting authority to reorganize the zone under the alternative site framework (ASF) adopted by the Board (74 FR 1170, 1/12/09 (correction 74 FR 3987, 1/22/09); 75 FR 71069–71070, 11/22/10). The ASF is an option for grantees for the establishment or reorganization of general-purpose zones and can permit significantly greater flexibility in the designation of new ''usage-driven'' FTZ sites for operators/users located within a grantee's ''service area'' in the context of the Board's standard 2,000-acre activation limit for a general-purpose zone project. The application was submitted pursuant to the Foreign-Trade Zones Act, as amended (19 U.S.C. 81a–81u), and the regulations of the Board (15 CFR part 400). It was formally filed on March 20, 2012.

FTZ 151 was approved by the Board on July 6, 1988 (Board Order 389, 53 FR 27058, 7/18/1988) and expanded on February 10, 1999 (Board Order 1023, 64 FR 8542, 2/22/1999) and April 4, 2004 (Board Order 1332, 69 FR 26067, 5/11/2004).

The current zone project includes the following sites: *Site 1* (820 acres)—Tall Timbers Industrial Center, Intersection of State Route 12 and County Road 95, Findlay; and *Site 3* (373 acres)—Ottawa Industrial Park, Intersection of Williamstown Street and Sugarmill Drive, Ottawa.

The grantee's proposed service area under the ASF would be Hardin, Putnam, Seneca, Allen and Hancock Counties, Ohio, as described in the application. If approved, the grantee would be able to serve sites throughout the service area based on companies' needs for FTZ designation. The proposed service area is within and adjacent to the Toledo Customs and Border Protection port of entry.

The applicant is requesting authority to reorganize its existing zone project to include both of the existing sites as ''magnet'' sites. The ASF allows for the possible exemption of one magnet site from the ''sunset'' time limits that generally apply to sites under the ASF, and the applicant proposes that Site 1 be so exempted. No usage-driven sites are being requested at this time. Because the ASF only pertains to establishing or reorganizing a general-purpose zone, the application would have no impact on FTZ 151's authorized subzones.

In accordance with the Board's regulations, Elizabeth Whiteman of the FTZ Staff is designated examiner to evaluate and analyze the facts and information presented in the application and case record and to report findings and recommendations to the Board.

Public comment is invited from interested parties. Submissions (original and 3 copies) shall be addressed to the Board's Executive Secretary at the address below. The closing period for their receipt is May 25, 2012. Rebuttal comments in response to material submitted during the foregoing period may be submitted during the subsequent 15-day period to June 11, 2012.

A copy of the application will be available for public inspection at the Office of the Executive Secretary, Foreign-Trade Zones Board, Room 2111, U.S. Department of Commerce, 1401 Constitution Avenue NW., Washington, DC 20230–0002, and in the ''Reading Room'' section of the Board's Web site, which is accessible via *www.trade.gov/ftz.* For further information, contact Elizabeth Whiteman at *Elizabeth.Whiteman@trade.gov* or (202) 482–0473.

Dated: March 20, 2012.

Andrew McGilvray,

Executive Secretary.

[FR Doc. 2012–7274 Filed 3–23–12; 8:45 am]

BILLING CODE P

DEPARTMENT OF COMMERCE

Foreign-Trade Zones Board

[A(32b)–3–2011]

Foreign-Trade Zone 45—Portland, OR Expansion of Manufacturing Authority Epson Portland, Inc. (Inkjet Ink); Notice of Approval of Restricted Authority

On December 22, 2011, the Port of Portland, grantee of Foreign-Trade Zone (FTZ) 45, requested to expand the scope of manufacturing authority approved within Subzone 45F, on behalf of Epson Portland, Inc. (EPI), in Hillsboro, Oregon. The request involved the use of privileged foreign (PF) status (19 CFR 146.41) inputs in manufacturing of ink for inkjet printer cartridges. Notice was given in the **Federal Register** inviting public comment (A(32b)–3–2011, 76 FR 81475–81476, 12/28/2011).

Section 400.32(b)(1) of the FTZ Board's regulations (15 CFR part 400) allows the Assistant Secretary for Import Administration to act for the Board in making decisions on new manufacturing authority when the zone benefits sought do not involve the election of non-privileged foreign status on items involving inverted tariffs. Pursuant to that regulatory provision, on March 8, 2012, the Assistant Secretary for Import Administration approved authority to include the use of certain PF status inputs in the manufacturing of ink for inkjet printer cartridges within Subzone 45F, subject to the FTZ Act (19 U.S.C. 81a–81u) and the Board's regulations, including Section 400.28.

The applicant's request for broader authority, including the manufacturing of inkjet ink involving foreign-sourced inputs that would be admitted to the subzone under nonprivileged foreign (NPF) status (19 CFR 146.42), will continue to be reviewed and processed under FTZ Docket 7–2012 (77 FR 4006, 1/26/2012).

Dated: March 20, 2012.

Andrew McGilvray,

Executive Secretary.

[FR Doc. 2012–7272 Filed 3–23–12; 8:45 am]

BILLING CODE P

DEPARTMENT OF COMMERCE

International Trade Administration

[A–570–831]

Fresh Garlic From the People's Republic of China: Extension of Time Limit for Final Results of the 2009–2010 Administrative Review

AGENCY: Import Administration, International Trade Administration, Department of Commerce.

FOR FURTHER INFORMATION CONTACT: Lingjun Wang, AD/CVD Operations, Office 6, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue NW., Washington, DC 20230; telephone: (202) 482–2316.

SUPPLEMENTARY INFORMATION:

Background

On October 20, 2011, the Department published partial preliminary results of the administrative review.[1] On December 7, 2011, the Department published preliminary results of the administrative review.[2] On February 27, 2012, the Department published partial final results of the administrative review.[3] The final results of the administrative review are currently due no later than April 5, 2012.

Statutory Time Limits

In antidumping duty administrative reviews, section 751(a)(3)(A) of the Tariff Act of 1930, as amended (the Act), requires the Department to make a final determination in an administrative review of an antidumping duty order within 120 days after the day on which the preliminary results are published. However, if it is not practicable to complete the review within this time period, section 751(a)(3)(A) of the Act allows the Department to extend the 120-day period to 180 days after publication of the preliminary results.

Extension of Time Limit for Final Results

The Department has determined that it is not practicable to complete the review within the 120-day time period

[1] *See Fresh Garlic From the People's Republic of China: Partial Preliminary Results, Rescission of, and Intent To Rescind, in Part, the 2009–2010 Administrative Review,* 76 FR 65172 (October 20, 2011).

[2] *See Fresh Garlic From the People's Republic of China: Preliminary Results of the 2009–2010 Antidumping Duty Administrative Review,* 76 FR 76375 (December 7, 2011) (*Preliminary Results*).

[3] *See Fresh Garlic From the People's Republic of China: Partial Final Results and Partial Final Rescission of the 2009–2010 Administrative Review,* 77 FR 11486 (February 27, 2012).

because it requires additional time to evaluate the surrogate value submissions and arguments made by the interested parties following the *Preliminary Results.* Therefore, in accordance with section 751(a)(3)(A) of the Act, the Department is extending the time limit for completing the final results of the administrative review from 120 days to 180 days. The final results are now due no later than June 4, 2012.

This notice is published in accordance with sections 751(a) and 777(i) of the Act.

Dated: March 20, 2012.

Gary Taverman,

Acting Deputy Assistant Secretary for Antidumping and Countervailing Duty Operations.

[FR Doc. 2012–7218 Filed 3–23–12; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

International Trade Administration

[A–821–801]

Solid Urea From the Russian Federation: Extension of Time Limit for Preliminary Results of Antidumping Duty Administrative Review

AGENCY: Import Administration, International Trade Administration, Department of Commerce.

DATES: *Effective Date:* March 26, 2012.

FOR FURTHER INFORMATION CONTACT: Dustin Ross or Minoo Hatten, AD/CVD Operations, Office 1, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue NW., Washington, DC 20230; telephone: (202) 482–0747 or (202) 482–1690, respectively.

SUPPLEMENTARY INFORMATION:

Background

At the request of interested parties, the Department of Commerce (the Department) initiated an administrative review of the antidumping duty order on solid urea from the Russian Federation for the period July 1, 2010, through June 30, 2011. *See Initiation of Antidumping and Countervailing Duty Administrative Reviews and Requests for Revocation in Part,* 76 FR 53404 (August 26, 2011).

Extension of Time Limit for Preliminary Results

Section 751(a)(3)(A) of the Tariff Act of 1930, as amended (the Act), requires the Department to complete the preliminary results within 245 days after the last day of the anniversary month of an order for which a review is requested. If it is not practicable to complete the review within this time period, section 751(a)(3)(A) of the Act allows the Department to extend the time limit for the preliminary results to a maximum of 365 days after the last day of the anniversary month.

We determine that it is not practicable to complete the preliminary results of this review by the current deadline of April 1, 2012, because we require additional time to analyze a detailed response to a supplemental questionnaire that was submitted on March 7, 2012. In addition, the numerous extensions we have granted for filing various responses has contributed to us requiring additional time to complete the preliminary results.

Therefore, we are extending the time period for issuing the preliminary results of this review by 75 days, until June 15, 2012.

This notice is published in accordance with section 751(a)(3)(A) of the Act and 19 CFR 351.213(h)(2).

Dated: March 20, 2012.

Gary Taverman,

Acting Deputy Assistant Secretary for Antidumping and Countervailing Duty Operations.

[FR Doc. 2012–7236 Filed 3–23–12; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

International Trade Administration

[C–580–866]

Bottom Mount Combination Refrigerator-Freezers From the Republic of Korea: Final Affirmative Countervailing Duty Determination

AGENCY: Import Administration, International Trade Administration, Department of Commerce.

SUMMARY: The Department of Commerce (the Department) determines that countervailable subsidies are being provided to producers and exporters of bottom mount combination refrigerator-freezers (bottom mount refrigerators) from the Republic of Korea (Korea). For information on the estimated subsidy rates, see the ''Suspension of Liquidation'' section of this notice.

DATES: *Effective Date:* March 26, 2012.

FOR FURTHER INFORMATION CONTACT: Myrna L. Lobo, Justin M. Neuman, or Milton Koch, AD/CVD Operations, Office 6, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue NW., Washington, DC 20230; telephone: (202) 482–2371, (202) 482–0486, and (202) 482–2584, respectively.

SUPPLEMENTARY INFORMATION:

Background

The U.S. producer that filed the petition for this investigation is Whirlpool Corporation (hereafter, Whirlpool, or ''petitioner''). This investigation covers 41 programs. The mandatory respondents in this investigation are: (1) Samsung Electronics Co., Ltd. (SEC), and its cross-owned affiliates Samsung Gwangju Electronics Co., Ltd. (SGEC) and Samsung Electronics Logitech (SEL); (2) LG Electronics (LGE) and its cross-owned affiliate, ServeOne Co., Ltd., and (3) Daewoo Electronics Corporation (DWE).

Period of Investigation

The period of investigation for which we are measuring subsidies is January 1, 2010, through December 31, 2010.

Case History

The following events have occurred since the Department published the *Preliminary Determination.*[1] From September through December 2011, the Department issued numerous supplemental questionnaires to all parties concerning the New Subsidies Allegations (NSA), cross ownership, and other program issues. All parties timely responded to the Department's supplemental questionnaires.

In September and October 2011, the petitioner filed comments on the supplemental responses of LGE and SEC, on the NSA questionnaire responses, and on cross-ownership of respondents. On October 17, 2011, the Government of Korea (GOK) submitted to the record the public version of a verification report from a prior investigation. Also in October, SEC filed pre-verification corrections. On October 27, 2011, the Department placed independent research on the record. On October 31, 2011, the Department placed on the record the Preliminary Scope Memorandum,[2] prepared in the companion antidumping duty (AD) investigation.

[1] *See Bottom Mount Combination Refrigerator-Freezers From the Republic of Korea: Preliminary Negative Countervailing Duty Determination and Alignment of Final Determination With Final Antidumping Determination,* 76 FR 55044 (September 6, 2011) (*Preliminary Determination*).

[2] *See* Memorandum from the Team to Gary Taverman, Acting Deputy Assistant Secretary for Antidumping and Countervailing Duty Operations, Re: Scope Modification Requests, dated October 26, 2011 (Preliminary Scope Memorandum).

In November 2011, the petitioner filed new information and comments on the NSA supplemental responses of the GOK and DWE, and on suppliers and verification issues for LGE and SEC. On November 28, 2011, the petitioner met with the Department and filed pre-verification comments.[3] On that date, the Department also issued verification outlines to the GOK, LGE, SEC, and DWE.

The Department conducted verification from December 5, 2011, through December 16, 2011. On December 21, 2011, the Department issued its Post-Preliminary Analysis of Cross-ownership and its Post-Preliminary Analysis of New Subsidy Allegations. On that date, the Department also issued its Post-Preliminary Analysis Regarding the Restructuring of Daewoo Electronics Corporation.

On February 2, 2012, the Department issued verification reports for LGE and SEC. On February 3, 2012, the Department issued verification reports for the GOK and DWE. Also on February 3, 2012, the Department met with counsel for SEC.[4] On February 14, 2012, the GOK, LGE, SEC, and DWE filed case briefs. On February 21, 2012, the Department issued its Post-Preliminary Analysis: GOK Preferential Lending Under the Daewoo Workout, and the GOK, LGE, SEC, and the petitioner filed rebuttal briefs. On February 24, 2012, the GOK and DWE filed case briefs on GOK Preferential Lending Under the Daewoo Workout. On February 27, 2012, the petitioner filed a rebuttal brief on GOK Preferential Lending Under the Daewoo Workout. On February 28, 2012, the Department held a public hearing, based on the timely requests of the petitioner, SEC, LGE, and DWE, filed in September and October 2011. On March 5, 2012, the Department met with the GOK and counsel for DWE.[5]

Scope Comments

In the *Preliminary Determination,* the Department stated that it was evaluating comments filed by the parties regarding the scope in the companion AD investigation. In *AD Preliminary Determination,*[6] we did not modify the description of the scope of the investigations in the manner requested by certain interested parties. Specifically, we did not modify the scope to be consistent with the Association of Home Appliance Manufacturers definition, nor did we exclude kimchi refrigerators or Quatro Cooling Refrigerators from the scope. We did, however, clarify the scope to eliminate any ambiguity with respect to the inclusion of Quatro Cooling Refrigerators in the scope of the investigation. *See AD Preliminary Determination,* 76 FR at 67690–67691; *see also* Preliminary Scope Memorandum. No party commented on our preliminary scope determination. Therefore, we have made no further changes to the description of the scope of the investigation.

Scope of the Investigation

The products covered by the investigation are all bottom mount combination refrigerator-freezers and certain assemblies thereof from Korea. For purposes of the investigation, the term ''bottom mount combination refrigerator-freezers'' denotes freestanding or built-in cabinets that have an integral source of refrigeration using compression technology, with all of the following characteristics:

- The cabinet contains at least two interior storage compartments accessible through one or more separate external doors or drawers or a combination thereof;
- An upper-most interior storage compartment(s) that is accessible through an external door or drawer is either a refrigerator compartment or convertible compartment, but is not a freezer compartment; [7] and
- There is at least one freezer or convertible compartment that is mounted below an upper-most interior storage compartment(s).

For purposes of the investigation, a refrigerator compartment is capable of storing food at temperatures above 32 degrees F (0 degrees C), a freezer compartment is capable of storing food at temperatures at or below 32 degrees F (0 degrees C), and a convertible compartment is capable of operating as either a refrigerator compartment or a freezer compartment, as defined above.

Also covered are certain assemblies used in bottom mount combination refrigerator-freezers, namely: (1) Any assembled cabinets designed for use in bottom mount combination refrigerator-freezers that incorporate, at a minimum: (a) An external metal shell, (b) a back panel, (c) a deck, (d) an interior plastic liner, (e) wiring, and (f) insulation; (2) any assembled external doors designed for use in bottom mount combination refrigerator-freezers that incorporate, at a minimum: (a) An external metal shell, (b) an interior plastic liner, and (c) insulation; and (3) any assembled external drawers designed for use in bottom mount combination refrigerator-freezers that incorporate, at a minimum: (a) An external metal shell, (b) an interior plastic liner, and (c) insulation.

The products subject to the investigation are currently classifiable under subheadings 8418.10.0010, 8418.10.0020, 8418.10.0030, and 8418.10.0040 of the Harmonized Tariff System of the United States (HTSUS). Products subject to this investigation may also enter under HTSUS subheadings 8418.21.0010, 8418.21.0020, 8418.21.0030, 8418.21.0090, and 8418.99.4000, 8418.99.8050, and 8418.99.8060. Although the HTSUS subheadings are provided for convenience and customs purposes, the written description of the merchandise subject to this scope is dispositive.

Analysis of Subsidy Programs and Comments Received

The subsidy programs under investigation and the issues raised in the case and rebuttal briefs by parties in this investigation are discussed in Memorandum to Paul Piquado, Assistant Secretary for Import Administration, Issues and Decision Memorandum for the Final Determination in the Countervailing Duty Investigation of Bottom Mount Combination Refrigerator-Freezers from the Republic of Korea (Decision Memorandum), which is hereby adopted by this notice. A list of the subsidy programs and the issues that parties raised and to which we responded in the Decision Memorandum is attached to this notice as an Appendix. The Decision Memorandum is a public document, which is on file electronically via Import Administration's Antidumping and Countervailing Duty Centralized Electronic Service System (IA ACCESS). Access to IA ACCESS is available in the Central Records Unit (CRU), room 7046 of the main Department of Commerce

[3] *See* Memorandum to the File from Justin Neuman, Meeting with Whirlpool Corporation Regarding the Countervailing Duty Investigation of Bottom Mount Combination Refrigerator-Freezers from the Republic of Korea, dated November 28, 2011.

[4] *See* Memorandum to the File from Gary Taverman, Ex Parte Meeting with Counsel for Samsung Electronics, Ltd., dated February 7, 2012.

[5] *See* Memorandum to the File, Ex Parte Meeting with Counsel for Daewoo Electronics Corporation Regarding the Countervailing Duty Investigation of Bottom Mount Combination Refrigerator-Freezers from the Republic of Korea, dated March 7, 2012.

[6] *Notice of Preliminary Determination of Sales at Less Than Fair Value, Postponement of Final Determination, and Negative Critical Circumstances Determination: Bottom Mount Combination Refrigerator-Freezers From the Republic of Korea,* 76 FR 67675 (November 2, 2011) (*AD Preliminary Determination*).

[7] The existence of an interior sub-compartment for ice-making in an upper-most storage compartment does not render an upper-most storage compartment a freezer compartment.

building. In addition, a complete version of the Decision Memorandum is also accessible on the Web at *http://ia.ita.doc.gov/frn/*. The signed Decision Memorandum and the electronic versions of the Decision Memorandum are identical in content.

Use of Facts Otherwise Available, Including Adverse Inferences

For purposes of this final determination, we relied, in part, on adverse facts available (AFA), as provided for in sections 776(a) and (b) of the Tariff Act of 1930, as amended (Act), to determine the countervailable subsidy rate for one program under investigation. A full discussion of our decision to apply AFA is presented in the Decision Memorandum in the section ''Application of Facts Available, Including the Application of Adverse Inferences.''

Injury Test

Because Korea is a ''Subsidies Agreement Country'' within the meaning of section 701(b) of the Act, the International Trade Commission (ITC) is required to determine pursuant to section 701(a)(2) of the Act whether imports of the subject merchandise from Korea materially injure, or threaten material injury to, a U.S. industry. On May 23, 2011, the ITC published its affirmative preliminary determination that there is a reasonable indication that an industry in the United States is materially injured by reason of allegedly subsidized imports from Korea of subject merchandise.[8]

Suspension of Liquidation

In accordance with section 705(c)(1)(B)(i)(I) of the Act, we have calculated an individual countervailable subsidy rate for each respondent. Section 705(c)(5)(A)(i) of the Act states that for companies not individually investigated, we will determine an ''all others'' rate equal to the weighted average of the countervailable subsidy rates established for exporters and producers individually investigated, excluding any zero and *de minimis* countervailable subsidy rates, and any rates based entirely on AFA under section 776 of the Act.

Notwithstanding the language of section 705(c)(5)(A)(i) of the Act, we have not calculated the ''all others'' rate by weight averaging the rates of DWE and SEC, because doing so risks disclosure of proprietary information. Therefore, we have calculated an average rate using other information on the record.[9] Since both DWE and SEC received countervailable export subsidies and the ''all others'' rate is an average based on the individually investigated exporters and producers, the ''all others'' rate includes export subsidies.[10]

Company	*Ad valorem* net subsidy rate (percent)
Daewoo Electronics Corporation	12.90
LG Electronics Inc	0.30
Samsung Electronics Co., Ltd./Samsung Gwangju Electronics Co., Ltd	2.46
All Others	2.79

Because the *Preliminary Determination* was negative, we did not instruct U.S. Customs and Border Protection (CBP) to suspend entries of subject merchandise. In accordance with sections 705(c)(1)(B)(ii) and (C) of the Act, as applicable, we are directing CBP to suspend liquidation of and to require the posting of a cash deposit or bond on all imports of the subject merchandise from Korea, other than those produced and exported by LGE because LGE's rate is *de minimis,* that are entered, or withdrawn from warehouse, for consumption on or after the date of publication of this notice in the **Federal Register.** The suspension of liquidation will remain in effect until further notice.

If the ITC issues a final affirmative injury determination, we will issue a CVD order. If the ITC determines that material injury, or threat of material injury, does not exist, this proceeding will be terminated and all estimated duties deposited or securities posted as a result of the suspension of liquidation will be refunded or canceled.

ITC Notification

In accordance with section 705(d) of the Act, we will notify the ITC of our determination. In addition, we are making available to the ITC all non-privileged and non-proprietary information relating to this investigation. We will allow the ITC access to all privileged and business proprietary information in our files, provided the ITC confirms that it will not disclose such information, either publicly or under an administrative protective order, without the written consent of the Assistant Secretary for Import Administration. In accordance with section 705(b)(3) of the Act, because our preliminary determination was negative and our final determination is affirmative, the ITC will make its final determination within 75 days after the Department makes its final determination.

Return or Destruction of Proprietary Information

In the event that the ITC issues a negative final injury determination, this notice will serve as the only reminder to parties subject to an administrative protective order (APO) of their responsibility concerning the destruction of proprietary information disclosed under APO in accordance with 19 CFR 351.305(a)(3). Timely written notification of the return/destruction of APO materials or conversion to judicial protective order is hereby requested. Failure to comply with the regulations and terms of an APO is a violation which is subject to sanction.

This determination is issued and published pursuant to sections 705(d) and 777(i) of the Act.

[8] *See Bottom Mount Combination Refrigerator-Freezers From Korea and Mexico,* 76 FR 29791 (May 23, 2011); and USITC Publication 4232 entitled Bottom Mount Combination Refrigerator-Freezers From Korea and Mexico: Investigation Nos. 701–TA–477 and 731–TA–1180–1181 (Preliminary) (May 2011).

[9] *See* Memorandum to the File, ''Calculation of the All Other Rate in the Countervailing Duty Investigation of Bottom Mount Combination Refrigerator-Freezers from the Republic Of Korea,'' dated concurrently with this notice.

[10] *See, e.g., Certain Seamless Carbon and Alloy Steel Standard, Line, and Pressure Pipe from the People's Republic of China: Final Affirmative Countervailing Duty Determination, Final Affirmative Critical Circumstances Determination,* 75 FR 57444 (September 21, 2010).

Dated: March 16, 2012.

Paul Piquado,

Assistant Secretary for Import Administration.

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[FR Doc. 2012–7217 Filed 3–23–12; 8:45 am]

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DEPARTMENT OF COMMERCE

International Trade Administration

[A–580–865]

Notice of Final Determination of Sales at Less Than Fair Value and Negative Critical Circumstances Determination: Bottom Mount Combination Refrigerator-Freezers From the Republic of Korea

AGENCY: Import Administration, International Trade Administration, Department of Commerce.

SUMMARY: We determine that imports of narrow bottom mount combination refrigerator-freezers (bottom mount refrigerators) from the Republic of Korea (Korea) are being, or are likely to be, sold in the United States at less than fair value (LTFV), as provided in section 735 of the Tariff Act of 1930, as amended (the Act). In addition, we determine that there is no reasonable basis to believe or suspect that critical circumstances exist with respect to the subject merchandise exported from Korea.

Based on our analysis of the comments received, we have made changes in the margin calculations. Therefore, the final determination differs from the preliminary determination. The final weighted-average dumping margins for the investigated companies are listed below in the section entitled ''Final Determination Margins.''

DATES: *Effective Date:* March 26, 2012.

FOR FURTHER INFORMATION CONTACT: Elizabeth Eastwood or Henry Almond, AD/CVD Operations, Office 2, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue NW., Washington, DC 20230; telephone: (202) 482–3874 and (202) 482–0049, respectively.

SUPPLEMENTARY INFORMATION:

Background

On November 2, 2011, the Department published in the **Federal Register** the preliminary determination of sales at LTFV in the antidumping duty investigation of bottom mount refrigerators from Korea.[1] Since the preliminary determination, the following events have occurred.

In November 2011, we issued supplemental questionnaires to two respondents, LG Electronics, Inc. (LG), and Samsung Electronics Co., Ltd. (Samsung), and we received responses to these supplemental questionnaires in this same month.

In November and December 2011, we verified the questionnaire responses of three respondents in this case, Daewoo Electronics Corporation (Daewoo), LG, and Samsung, in accordance with section 782(i) of the Act.

In January 2012, the Government of Korea submitted comments on certain aspects of the Department's preliminary determination.

In February 2012, Whirlpool Corporation (hereafter, the petitioner) and two of the three respondents submitted case and rebuttal briefs. Daewoo submitted only a rebuttal brief. Also in February 2012, the Department held a public hearing at the request of the petitioner and the three respondents.

Subsequent to the *Preliminary Determination,* the Department revised the computer programs used to calculate the respondents' dumping margins to ensure that they accurately reflected the methodological choices made in that determination. These revisions to the programming, had they been included in the preliminary determination, would not have altered the weighted-average dumping margins calculated there.[2]

Period of Investigation

The period of investigation (POI) is January 1, 2010, through December 31, 2010.

Scope of Investigation

The products covered by the investigation are all bottom mount combination refrigerator-freezers and certain assemblies thereof from Korea. For purposes of the investigation, the term ''bottom mount combination refrigerator-freezers'' denotes freestanding or built-in cabinets that have an integral source of refrigeration using compression technology, with all of the following characteristics:

- The cabinet contains at least two interior storage compartments accessible through one or more separate external doors or drawers or a combination thereof;
- An upper-most interior storage compartment(s) that is accessible through an external door or drawer is either a refrigerator compartment or convertible compartment, but is not a freezer compartment; [3] and
- There is at least one freezer or convertible compartment that is mounted below an upper-most interior storage compartment(s).

For purposes of the investigation, a refrigerator compartment is capable of storing food at temperatures above 32 degrees F (0 degrees C), a freezer compartment is capable of storing food at temperatures at or below 32 degrees F (0 degrees C), and a convertible compartment is capable of operating as either a refrigerator compartment or a freezer compartment, as defined above.

Also covered are certain assemblies used in bottom mount combination refrigerator-freezers, namely: (1) Any assembled cabinets designed for use in bottom mount combination refrigerator-freezers that incorporate, at a minimum: (a) An external metal shell, (b) a back panel, (c) a deck, (d) an interior plastic liner, (e) wiring, and (f) insulation; (2) any assembled external doors designed for use in bottom mount combination refrigerator-freezers that incorporate, at a minimum: (a) An external metal shell, (b) an interior plastic liner, and (c) insulation; and (3) any assembled external drawers designed for use in bottom mount combination refrigerator-freezers that incorporate, at a minimum: (a) An external metal shell, (b) an interior plastic liner, and (c) insulation.

The products subject to the investigation are currently classifiable under subheadings 8418.10.0010, 8418.10.0020, 8418.10.0030, and 8418.10.0040 of the Harmonized Tariff System of the United States (HTSUS). Products subject to this investigation may also enter under HTSUS subheadings 8418.21.0010, 8418.21.0020, 8418.21.0030, 8418.21.0090, and 8418.99.4000, 8418.99.8050, and 8418.99.8060. Although the HTSUS subheadings are provided for convenience and customs purposes, the written description of the merchandise subject to this scope is dispositive.

Scope Comments

In the *Preliminary Determination,* we did not modify the description of the scope of this investigation in the manner requested by certain interested parties. Specifically, we did not modify the scope to be consistent with the Association of Home Appliance Manufacturers (AHAM) definition, nor did we exclude kimchi refrigerators or Quatro Cooling Refrigerators from the scope. We did, however, clarify the scope to eliminate any ambiguity with respect to the inclusion of Quatro Cooling Refrigerators in the scope of the investigation. *See Preliminary Determination,* 76 FR at 67677. No party

[1] *See Notice of Preliminary Determination of Sales at Less Than Fair Value, Postponement of Final Determination, and Negative Critical Circumstances Determination: Bottom Mount Combination Refrigerator-Freezers from the Republic of Korea,* 76 FR 67675 (Nov. 2, 2011) (*Preliminary Determination*).

[2] *See* March 16, 2012, Memoranda to the File entitled, ''Calculations Performed for Daewoo Electronics Corporation (Daewoo) for the Final Determination in the Antidumping Duty Investigation of Bottom Mount Combination Refrigerator-Freezers from the Republic of Korea,'' ''Calculations Performed for LG for the Final Determination in the Antidumping Duty Investigation of Bottom Mount Combination Refrigerator-Freezers from the Republic of Korea'' (LG Calculation Memo), and ''Calculations Performed for Samsung Electronics Corporation (Samsung) for the Final Determination in the Antidumping Duty Investigation of Bottom Mount Refrigerators from Korea'' (Samsung Calculation Memo), which contain the revised preliminary antidumping duty margin program log and output for each respondent.

[3] The existence of an interior sub-compartment for ice-making in an upper-most storage compartment does not render an upper-most storage compartment a freezer compartment.

commented on our preliminary scope determination. Therefore, we made no further changes to the description of the scope, as stated in the *Preliminary Determination.*

Cost of Production

As discussed in the preliminary determination, we conducted an investigation to determine whether the respondents made comparison market sales of the foreign like product during the POI at prices below their COP within the meaning of section 773(b) of the Act. *See Preliminary Determination,* 76 FR 67684–85 (Nov. 2, 2011). For this final determination, we performed the cost test following the same methodology as in the *Preliminary Determination.*

We found that 20 percent or more of each respondent's sales of a given product during the POI were at prices less than the weighted-average COP for this period. Thus, we determined that these below-cost sales were made in ''substantial quantities'' within an extended period of time and at prices which did not permit the recovery of all costs within a reasonable period of time in the normal course of trade. *See* sections 773(b)(1)–(2) of the Act.

Therefore, for purposes of this final determination, we found that each respondent made below-cost sales not in the ordinary course of trade. Consequently, we disregarded these sales and used the remaining sales as the basis for determining normal value for each respondent pursuant to section 773(b)(1) of the Act.

Targeted Dumping

The Act allows the Department to employ the average-to-transaction margin calculation methodology under the following circumstances: (1) There is a pattern of export prices that differ significantly among purchasers, regions or periods of time; and (2) the Department explains why such differences cannot be taken into account using the average-to-average or transaction-to-transaction methodology. *See* section 777A(d)(1)(B) of the Act.

In the *Preliminary Determination,* we conducted time-period targeted dumping analyses for LG and Samsung based on timely allegations of targeted dumping filed by the petitioner, using the methodology adopted in *Certain Steel Nails from the United Arab Emirates: Notice of Final Determination of Sales at Not Less Than Fair Value,* 73 FR 33985 (June 16, 2008), and *Certain Steel Nails from the People's Republic of China: Final Determination of Sales at Less Than Fair Value and Partial Affirmative Determination of Critical Circumstances,* 73 FR 33977 (June 16, 2008), and applied in more recent investigations.[4] As a result, we preliminarily determined that there was a pattern of U.S. prices for comparable merchandise that differed significantly among certain time periods for Samsung and LG, in accordance with section 777A(d)(1)(B)(i) of the Act.

Further, for both Samsung and LG, we found that the standard average-to-average methodology did not take into account the price differences because the alternative average-to-transaction methodology yielded a material difference in the margin. Accordingly, we preliminarily applied the average-to-transaction methodology to all U.S. sales made by LG and Samsung. *See Preliminary Determination,* 76 FR at 67678–67679.

For purposes of the final determination, we performed our targeted-dumping analysis following the methodology employed in the *Preliminary Determination,* after taking into account the petitioner's revised targeted dumping allegation with respect to Samsung, and making certain revisions to LG's and Samsung's reported U.S. sales data based on verification findings and other comments submitted by the parties, as enumerated in the ''Margin Calculations'' section of the ''Issues and Decision Memorandum'' (Decision Memorandum) from Gary Taverman, Acting Deputy Assistant Secretary for Antidumping and Countervailing Duty Operations, Import Administration, to Paul Piquado, Assistant Secretary for Import Administration, dated March 16, 2012. In so doing, we found that the results of our final targeted-dumping analysis were generally consistent with those of our preliminary targeted-dumping analysis. Therefore, we continued to apply the alternative average-to-transaction methodology for LG's and Samsung's U.S. sales, in the final determination. *See* the LG Calculation Memo and the Samsung Calculation Memo for further discussion.

Critical Circumstances

In the *Preliminary Determination,* we found that critical circumstances do not exist with respect to imports of bottom mount refrigerators produced in, and exported from, Korea. *See Preliminary Determination,* 76 FR at 67686–67687. Samsung submitted comments in support of our preliminary negative critical circumstances determination with respect to it, and reiterated, among other things, that its imports have not been massive since the filing of the petition.

For the final determination, we relied on updated shipment data provided by Daewoo, LG, and Samsung, which we examined at verification. Based on our analysis of these data and the comments submitted by the parties, we continue to find that critical circumstances do not exist with respect to imports of bottom mount refrigerators from Korea, as explained below.

Section 735(a)(3) of the Act provides that the Department will determine that critical circumstances exist if there is a reasonable basis to believe or suspect that: (A)(i) There is a history of dumping and material injury by reason of dumped imports in the United States or elsewhere of the subject merchandise; or (ii) the person by whom, or for whose account, the merchandise was imported knew or should have known that the exporter was selling the subject merchandise at less than its fair value and that there was likely to be material injury by reason of such sales; and (B) there have been massive imports of the subject merchandise over a relatively short period. Section 351.206(h)(1) of the Department's regulations provides that, in determining whether imports of the subject merchandise have been ''massive,'' the Department normally will examine: (i) The volume and value of the imports; (ii) seasonal trends; and (iii) the share of domestic consumption accounted for by the imports. In addition, 19 CFR 351.206(h)(2) provides that an increase in imports of 15 percent during the ''relatively short period'' of time may be considered ''massive.'' Section 351.206(i) of the Department's regulations defines ''relatively short period'' as normally being the period beginning on the date the proceeding begins (*i.e.,* the date the petition is filed) and ending at least three months later. The regulations also provide, however, that if the Department finds that importers, exporters, or producers had reason to believe, at some time prior to the beginning of the proceeding, that a proceeding was likely, the Department may consider a period of not less than three months from that earlier time.

In determining whether the above criteria have been satisfied, we examined: (1) The evidence placed on the record by the respondents and the petitioner; and (2) the International

[4] These investigations include *Certain Coated Paper Suitable for High-Quality Print Graphics Using Sheet-Fed Presses From Indonesia: Final Determination of Sales at Less Than Fair Value,* 75 FR 59223 (Sept. 27, 2010), and accompanying Issues and Decision Memorandum at Comment 1, and *Multilayered Wood Flooring From the Peoples' Republic of China: Final Determination of Sales at Less Than Fair Value,* 76 FR 64318 (Oct. 18, 2011), and accompanying Issues and Decision Memorandum at Comment 4.

Trade Commission's (ITC's) preliminary determination of injury (*see Bottom Mount Refrigerator Freezers from Mexico and Korea, Investigation Nos. 701–TA–477 and 731–TA–1180–1181* (Preliminary), 76 FR 29791 (May 23, 2011) (*ITC Preliminary Determination*)).

To determine whether there is a history of injurious dumping of the merchandise under investigation, in accordance with section 735(a)(3)(A)(i) of the Act, the Department normally considers evidence of an existing antidumping duty order on the subject merchandise in the United States or elsewhere to be sufficient.[5] As mentioned in the *Preliminary Determination,* while the petitioner noted that New Zealand imposed antidumping duties on the subject merchandise produced in Korea in 2001, this order was terminated in 2006. Moreover, the petitioner did not identify any additional proceedings with respect to Korean-origin products, nor are we aware of any antidumping duty order in any country on bottom mount refrigerators from Korea. For this reason, the Department does not find a history of injurious dumping of the subject merchandise from Korea pursuant to section 735(a)(3)(A)(i) of the Act.

To determine whether the person by whom, or for whose account, the merchandise was imported knew or should have known that the exporter was selling the subject merchandise at LTFV, and that there was likely to be material injury by reason of such sales in accordance with section 735(a)(3)(A)(ii) of the Act, the Department normally considers margins of 25 percent or more for export price (EP) sales or 15 percent or more for constructed export price (CEP) transactions sufficient to impute knowledge of dumping.[6]

The final dumping margin calculated for LG exceeds the threshold sufficient to impute knowledge of dumping (*i.e.,* 15 percent for CEP sales, which are the vast majority of the sales on which the calculation is based). Therefore, we determine that there is sufficient basis to find that importers should have known that LG was selling the subject merchandise at LTFV pursuant to section 735(a)(3)(A)(ii) of the Act. For Daewoo and Samsung, we calculated final margins of *de minimis* and 5.16 percent, respectively, which do not meet the 15- and 25-percent thresholds necessary to impute knowledge of dumping for either CEP or EP sales. Finally, for the companies covered by the ''All Others'' rate, the final calculated dumping margin of 10.29 percent also does not meet the 15-percent threshold necessary to impute knowledge of dumping for CEP sales, which are the vast majority of the sales on which the calculation of the ''All Others'' rate is based. Therefore, we find that the importer knowledge criterion, as set forth in section 735(a)(3)(A)(ii) of the Act, has been met for LG, but has not been met for Daewoo, Samsung, and the companies covered by the ''All Others'' rate.

In determining whether an importer knew or should have known that there was likely to be material injury by reason of dumped imports, the Department normally will look to the preliminary injury determination of the ITC. If the ITC finds a reasonable indication of present material injury to the relevant U.S. industry, the Department will determine that a reasonable basis exists to impute importer knowledge that material injury is likely by reason of such imports. *See e.g., Certain Orange Juice from Brazil.* In the present case, the ITC preliminarily found reasonable indication that an industry in the United States is materially injured by imports of bottom mount refrigerators from Korea. *See ITC Preliminary Determination.* Based on the ITC's preliminary determination of injury, and the final antidumping margin for LG, the Department finds that there is a reasonable basis to conclude that the importer knew or should have known that there was likely to be injurious dumping of subject merchandise for these companies.

In determining whether there are ''massive imports'' over a ''relatively short period,'' pursuant to section 735(a)(3)(B) of the Act, the Department normally compares the import volumes of the subject merchandise for at least three months immediately preceding the filing of the petition (*i.e.,* the base period) to a comparable period of at least three months following the filing of the petition (*i.e.,* the comparison period). Accordingly, in determining whether imports of the subject merchandise have been massive, we based our analysis for each of the three companies on shipment data for comparable seven-month periods preceding and following the filing of the petition.

Specifically, the Department requested and obtained from each of the respondents monthly shipment data from January 2008 to October 2011. To determine whether imports of subject merchandise have been massive over a relatively short period, we compared, pursuant to 19 CFR 351.206(h)(1)(i), the respondents' export volumes for the seven months before the filing of the petition (*i.e.,* September 2010–March 2011) to those during the seven months after the filing of the petition (*i.e.,* April through October 2011). These periods were selected based on the Department's practice of using the longest period for which information is available up to the date of the preliminary determination.[7] According to the monthly shipment information, we found the volume of shipments of bottom mount refrigerators increased by more than 15 percent for LG.

For purposes of our ''massive imports'' determination, we also considered the impact of seasonality on imports of bottom mount refrigerators based on interested party comments and information contained in the ITC's preliminary determination. In order to determine whether the seasonality factor accounted for the increase in imports observed for each of the respondents in the post-petition filing period (the comparison period), we analyzed company-specific shipment data for a historical three-year period, where possible, using the same base and comparison time periods noted above. As a result of this analysis, we found that there is a consistent pattern of seasonality in the industry, and that seasonal trends account for the increase in imports subsequent to the filing of the petition from each of the respondents. Specifically, with respect to LG, we found that the percentage increase in shipments during the comparison period is not related to the filing of the petition but rather to the consistent seasonal trends in the industry because shipments during the April–October time period were consistently higher than those in the September–March time period, and the shipment increases observed in the April–October time period from year to

[5] *See e.g., Certain Magnesia Carbon Bricks From the People's Republic of China: Notice of Preliminary Affirmative Determination of Critical Circumstances,* 75 FR 28237 (May 20, 2010), unchanged in *Certain Magnesia Carbon Bricks From the People's Republic of China: Final Determination of Sales at Less Than Fair Value and Critical Circumstances* 75 FR 45468 (Aug. 2, 2010).

[6] *See e.g., Notice of Preliminary Determination of Sales at Less Than Fair Value, Postponement of Final Determination, and Affirmative Preliminary Critical Circumstances Determination: Certain Orange Juice from Brazil,* 70 FR 49557 (Aug. 24, 2005), unchanged in *Notice of Final Determination of Sales at Less than Fair Value and Affirmative Final Determination of Critical Circumstances: Certain Orange Juice from Brazil,* 71 FR 2183 (Jan. 13, 2006) (*Certain Orange Juice from Brazil*).

[7] *See Notice of Preliminary Determination of Sales at Less Than Fair Value and Postponement of Final Determination: Silicon Metal From the Russian Federation,* 67 FR 59253, 59256 (Sept. 20, 2001), unchanged in *Notice of Final Determination of Sales at Less Than Fair Value: Silicon Metal From the Russian Federation,* 68 FR 6885 (Feb. 11, 2003).

year decreased. Therefore, for purposes of the final determination, we find that imports from LG during the period after the filing of the petition have not been massive in accordance with section 735(a)(3)(B) of the Act.

In summary, we find that there is a reasonable basis to believe or suspect importers had knowledge of dumping and the likelihood of material injury with respect to bottom mount refrigerators produced and exported from Korea by LG. However, we do not find that there have been massive imports of bottom mount refrigerators over a relatively short period from LG due to seasonality. Therefore, for the reasons stated above, the Department finds that critical circumstances do not exist for imports of the subject merchandise from Korea. For a complete discussion of our final critical circumstances analysis, see the Decision Memorandum at Comment 2 and the March 16, 2012, Memorandum to James P. Maeder, Jr., Director, Office 2, from The Team entitled, ''Antidumping Duty Investigation of Certain Bottom Mount Refrigerator Freezers from Korea—Final Determination of Critical Circumstances.''

Analysis of Comments Received

All issues raised in the case and rebuttal briefs by parties in this investigation are addressed in the Decision Memorandum, which is adopted by this notice. Parties can find a complete discussion of the issues raised in this investigation and the corresponding recommendations in this public memorandum, which is on file in the Central Records Unit, room 7046 of the main Department building.

In addition, a complete version of the Decision Memorandum can be accessed directly on the Web at *http://ia.ita.doc.gov/frn/index.html.* The paper copy and electronic version of the Decision Memorandum are identical in content.

Changes Since the Preliminary Determination

Based on our analysis of the comments received and our findings at verification, we have made certain changes to the margin calculations. For a discussion of these changes, see the ''Margin Calculations'' section of the Decision Memorandum.

Verification

As provided in section 782(i) of the Act, we verified the sales and cost information submitted by the respondents for use in our final determination. We used standard verification procedures including an examination of relevant accounting and production records, and original source documents provided by the respondents.

Continuation of Suspension of Liquidation

Pursuant to 735(c)(1)(B) of the Act, we will instruct U.S. Customs and Border Protection (CBP) to continue to suspend liquidation of all entries of subject merchandise from Korea, entered, or withdrawn from warehouse, for consumption on or after November 2, 2011, the date of publication of the preliminary determination in the **Federal Register**. CBP shall require a cash deposit or the posting of a bond equal to the estimated amount by which the normal value exceeds the U.S. price as shown below, adjusted for export subsidies found in the final determination of the companion countervailing duty investigation of this merchandise. Specifically, consistent with our practice, where the product under investigation is also subject to a concurrent countervailing duty investigation, we instruct CBP to require a cash deposit or posting of a bond equal to the amount by which the normal value exceeds the EP or CEP, as indicated below, less the amount of the countervailing duty determined to constitute an export subsidy.[8]

Accordingly, for cash deposit purposes, we are subtracting from the applicable cash deposit rate that portion of the rate attributable to the export subsidies found in the affirmative countervailing duty determination for each respondent with a final dumping margin above *de minimis* (*i.e.,* 1.65 percent for Samsung and 1.60 percent for the companies covered by the ''All Others'' rate). After the adjustment for the cash deposit rates attributed to export subsidies, the resulting cash deposit rates will be 3.51 percent for Samsung and 8.69 percent for the companies covered by the ''All Others'' rate. For LG, although its final dumping margin is above *de minimis,* the Department found no export subsidies for this company and therefore we have not adjusted LG's final cash deposit rate. For Daewoo, because its estimated weighted-average final dumping margin is zero, we are not directing CBP to suspend liquidation of entries of bottom mount refrigerators produced and exported by this company. These instructions suspending liquidation will remain in effect until further notice.

Final Determination Margins

The weighted-average dumping margins are as follows:

Exporter/manufacturer	Weighted-average margin percentage	Critical circumstances
Daewoo Electronics Corporation	0.00	No.
LG Electronics, Inc	15.41	No.
Samsung Electronics Co., Ltd	5.16	No.
All Others	10.29	No.

''All Others'' Rate

In accordance with section 735(c)(5)(A) of the Act, we have based the ''All Others'' rate on the simple average of the dumping margins calculated for the exporters/manufacturers investigated in this proceeding. The ''All Others'' rate is calculated exclusive of all *de minimis* margins and margins based entirely on AFA. Because we cannot apply our normal methodology of calculating a weighted-average margin due to requests to protect business-proprietary information, we find this rate to be the best proxy of the actual weighted-average margin determined for the mandatory respondents.[9]

Disclosure

We will disclose the calculations performed within five days of the date of publication of this notice to parties in this proceeding in accordance with 19 CFR 351.224(b).

[8] *See, e.g., Notice of Final Determination of Sales at Less Than Fair Value: Carbazole Violet Pigment 23 From India,* 69 FR 67306, 67307 (Nov. 17, 2004).

[9] *See Ball Bearings and Parts Thereof From France, et al.: Final Results of Antidumping Duty Administrative Reviews, Final Results of Changed-Circumstances Review, and Revocation of an Order in Part,* 75 FR 53661, 53663 (Sept. 1, 2010).

ITC Notification

In accordance with section 735(d) of the Act, we have notified the ITC of our final determination. As our final determination is affirmative, the ITC will determine within 45 days whether imports of the subject merchandise are causing material injury, or threat of material injury, to an industry in the United States. If the ITC determines that material injury or threat of injury does not exist, the proceeding will be terminated and all securities posted will be refunded or canceled. If the ITC determines that such injury does exist, the Department will issue an antidumping duty order directing CBP to assess antidumping duties on all imports of the subject merchandise entered, or withdrawn from warehouse, for consumption on or after the effective date of the suspension of liquidation.

Return or Destruction of Proprietary Information

This notice will serve as the only reminder to parties subject to administrative protective order (APO) of their responsibility concerning the destruction of proprietary information disclosed under APO in accordance with 19 CFR 351.305(a)(3). Timely written notification of return/destruction of APO materials or conversion to judicial protective order is hereby requested. Failure to comply with the regulations and the terms of an APO is a sanctionable violation.

We are issuing and publishing this determination and notice in accordance with sections 735(d) and 777(i) of the Act.

Dated: March 16, 2012.

Paul Piquado,

Assistant Secretary for Import Administration.

Appendix—Issues in Decision Memorandum

General Issues

1. Targeted Dumping
2. Zeroing in Average-to-Transaction Comparisons
3. Adjustments to Expenses Paid to Affiliated Parties
4. Classification of Return Freight Expenses

Company-Specific Issues

Daewoo

5. General and Administrative Expenses for Daewoo

LG

6. LG's Corrected Control Numbers
7. LG's Home Market Rebates
8. LG's Home Market Advertising Expenses
9. LG's Home Market Payment Dates
10. LG's U.S. Payment Dates
11. LG's U.S. Billing Adjustments
12. LG's U.S. Lump Sum and Sell-Out Rebates
13. LG's Non-Product-Specific Accruals for U.S. Rebates
14. LG's U.S. Freight Expenses
15. LG's U.S. Indirect Selling Expenses
16. LG's U.S. Inventory Carrying Costs
17. LG's Materials Purchased from Affiliated Parties
18. LG's Research and Development (R&D) Expenses

Samsung

19. Critical Circumstances
20. Use of Total Adverse Facts Available (AFA) for Samsung
21. Samsung's Early Payment Discounts in the Home Market
22. Samsung's Home Market Rebates on Discontinued Models and Kimchi Refrigerators
23. Samsung's Remaining Home Market Rebates
24. Samsung's Home Market Advertising Expenses
25. Samsung's Home Market Warranty Expenses
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27. Samsung's U.S. Rebates
28. Treatment of Payments for Defective Samsung Merchandise
29. The Denominator of Various Expense Calculations for Samsung
30. Samsung's U.S. Credit Periods
31. Samsung's U.S. Interest Rate
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33. Classification of Certain Costs as Packaging or Packing for Samsung
34. Corrections Presented at the Start of Samsung's Cost Verification
35. SEC's G&A Ratio
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37. Samsung's Financing Costs
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39. Samsung's R&D Expenses

[FR Doc. 2012–7237 Filed 3–23–12; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

International Trade Administration

[C–570–976]

Galvanized Steel Wire From the People's Republic of China: Final Affirmative Countervailing Duty Determination

AGENCY: Import Administration, International Trade Administration, Department of Commerce.

SUMMARY: The Department of Commerce (the Department) determines that countervailable subsidies are being provided to producers and exporters of galvanized steel wire (galvanized wire) from the People's Republic of China (the PRC). For information on the estimated subsidy rates, see the ''Suspension of Liquidation'' section of this notice.

DATES: *Effective Date:* March 26, 2012.

FOR FURTHER INFORMATION CONTACT: Nicholas Czajkowski or David Lindgren, AD/CVD Operations, Office 6, Import Administration, U.S. Department of Commerce, Room 7866, 14th Street and Constitution Avenue NW., Washington, DC 20230; telephone: 202–482–1395 or 202–482–3870, respectively.

SUPPLEMENTARY INFORMATION:

Background

The U.S. producers that filed the petition for this investigation are Davis Wire Corporation, Johnstown Wire Technologies, Inc., Mid-South Wire Company, Inc., National Standard, LLC, and Oklahoma Steel & Wire Company, Inc. (collectively, Petitioners). This investigation covers 40 programs. The mandatory respondents in this investigation are: (1) M&M Industries Co. Ltd. (M&M); (2) Shandong Hualing Hardware and Tool Co., Ltd. (Hualing); (3) Shanghai Bao Zhang Industry Co. Ltd. and its cross-owned affiliated companies Anhui Bao Zhang Metal Products Co., Ltd. and Shanghai Li Chao Industry Co., Ltd. (collectively, the Bao Zhang Companies); and, (4) Tianjin Huayuan Metal Wire Products Co., Ltd. and its cross-owned affiliated companies Tianjin Tianxin Metal Products Co., Ltd. and Tianjin Mei Jia Hua Trade Co., Ltd. (collectively, the Huayuan Companies).

Period of Investigation

The period of investigation for which we are measuring subsidies is January 1, 2010, through December 31, 2010.

Case History

The following events have occurred since the Department published the *Preliminary Determination* [1] on September 6, 2011.[2] The Huayuan Companies filed a ministerial error allegation on September 7, 2011, and, on September 12, 2011, Petitioners filed responses to the Huayuan Companies' allegation. On September 29, 2011, the Department released its analysis of the ministerial error allegation, finding that no ministerial errors were made in the *Preliminary Determination.* Petitioners, the Huayuan Companies and the

[1] *See Galvanized Steel Wire From the People's Republic of China: Preliminary Affirmative Countervailing Duty Determination and Alignment of Final Determination With Final Antidumping Determination,* 76 FR 55031 (September 6, 2011) (*Preliminary Determination*).

[2] Public versions of all business proprietary documents and all public documents are on file electronically via Import Administration's Antidumping and Countervailing Duty Centralized Electronic Service System (IA ACCESS). Access to IA ACCESS is available in the Central Records Unit (CRU), room 7046 of the main Department of Commerce building.

Government of the People's Republic of China (GOC) filed requests for a hearing on September 14, 22 and October 6, 2011, respectively, and, on January 30, 2012, all three parties withdrew their requests for a hearing.

Between September 15 and October 21, 2011, the GOC, Petitioners, the Bao Zhang Companies and the Huayuan Companies filed factual information submissions. Except for the Bao Zhang Companies' October 21, 2011 wire rod benchmark submission, all were rejected by the Department as untimely under 19 CFR 351.301(c). The Department informed Petitioners they could re-file certain portions of their rejected material, which they did on October 31, 2011. On September 19, 2011, the Department issued supplemental questionnaires to the GOC, the Bao Zhang Companies, and the Huayuan Companies, which, in turn, submitted responses between September 28 and October 3, 2011. On October 7, 2011, the Department issued additional supplemental questionnaires to the Bao Zhang Companies and the GOC, with responses filed on October 13 and 14, 2011, respectively. Moreover, on October 14, 2011, Department issued a supplemental questionnaire to the Huayuan Companies, which filed a response on October 24, 2011.

Between October 21 and November 2, 2011, the Department issued verification outlines to the GOC, the Bao Zhang Companies, the Huayuan Companies and M&M. On October 24, 2011, Petitioners filed pre-verification comments. The Department conducted verification of the Bao Zhang Companies and the GOC from October 31 to November 8, 2011. Although scheduled for verification, the Huayuan Companies and M&M verbally informed the Department on November 3, 2011 that they would not participate in verification; a letter filed on November 9, 2011 stated the reasons for their decision not to participate. The Bao Zhang Companies filed minor corrections on November 4, 2011, and on November 10 and 15, 2011, the Bao Zhang Companies and the GOC, respectively, timely filed verification exhibits. The Department issued verification reports for the Bao Zhang Companies and the GOC on December 22, 2011.

With respect to scope issues, on November 2, 2011, Qingdao Ant Hardware Manufacturing Co., Ltd. (AHM) placed on the record physical samples and other information pertaining to the scope of the investigation, and, on November 16, 2011, a public viewing of the physical samples was held at the Department. On December 15, 2011, the Department placed on the record of this investigation the preliminary determinations in the corresponding antidumping duty (AD) investigations of galvanized wire from the PRC and Mexico [3] in which scope comments filed prior to the preliminary countervailing duty (CVD) determination were addressed. When placing these preliminary AD determinations on the record, we requested that parties submit any comments on scope issues when they filed their case briefs.[4]

On January 9, 2012, the GOC requested that the Department terminate this investigation based on the U.S. Court of Appeals for the Federal Circuit December 19, 2011 ruling in *GPX International Tire Corp.* v. *United States*.[5] On January 13, 2012, Petitioners filed rebuttal comments in response to the GOC's request for termination.

The Department issued a post-preliminary analysis memorandum regarding three programs on January 17, 2012.[6] Interested parties submitted case briefs on January 25 and 31, 2012, and rebuttal briefs on February 6, 2012. On March 1, 2012, the Department requested all parties in all three galvanized wire investigations that filed scope comments in their case and rebuttal briefs to ensure their comments were placed on the records of all three investigations, and all parties were provided an opportunity to comment on these scope comments. No additional comments on scope issues were submitted.

Scope Comments

As referenced in the ''Case History'' section above, the Department placed the preliminary determinations of the companion galvanized wire AD investigations from Mexico and the PRC on the record of this investigation. In those preliminary determinations, the Department found that galvanized wire with a diameter less than one millimeter was subject to the scope of the investigation. We invited parties to comment on this issue. No additional comments were made on this issue. Thus, the Department continues to find, specifically, that galvanized wire with a diameter less than one millimeter but equal to or greater than 0.5842 millimeters is covered by the scope.

Also, as noted in the ''Case History'' section above, all scope-related comments submitted by parties in all three investigations in their case and rebuttal briefs are on the record of all three investigations. Petitioners and AHM provided comments on the scope and merchandise that is to be covered under the scope. Based on our analysis of these comments, the Department continues to find that hobby wire, which is galvanized steel wire, in lengths of more than 15 feet, is properly included in the scope of this investigation.[7] Further, certain parties in the companion AD investigation involving Mexico provided comments on the scope and merchandise that is to be covered under the scope. Based on our analysis of these comments, the Department has clarified the scope language to include not only circular cross section material, but also out-of-round material that meets the circular tolerances. In addition, the Department has included an additional HTSUS subheading as part of the scope description.[8]

Scope of Investigation

The merchandise covered by this investigation is galvanized steel wire. *See* Appendix I for a complete description of the scope of this investigation.

Analysis of Subsidy Programs and Comments Received

The subsidy programs under investigation and the issues raised in the case and rebuttal briefs by parties in this investigation are discussed in Memorandum to Paul Piquado, Assistant Secretary for Import Administration, Issues and Decision Memorandum for the Final

[3] *See Galvanized Steel Wire From the People's Republic of China: Preliminary Determination of Sales at Less Than Fair Value and Postponement of Final Determination,* 76 FR 68407 (November 4, 2011); *see* also *Galvanized Steel Wire From Mexico: Preliminary Determination of Sales at Less Than Fair Value and Postponement of Final Determination,* 76 FR 68422 (November 4, 2011).

[4] *See* Memorandum to File ''Decisions Regarding Scope Comments from Investigations of Galvanized Steel Wire from the PRC and Mexico,'' dated December 15, 2011.

[5] *See GPX Int'l Tires Corp.* v. *United States,* 666 F.3d 732 (Fed. Cir. 2011).

[6] *See* Memorandum to Paul Piquado, Assistant Secretary for Import Administration from Barbara E. Tillman, Director, AD/CVD Operations, Office 6, through Christian Marsh Deputy Assistant Secretary for Antidumping and Countervailing Duty Operations ''Countervailing Duty Investigation on Galvanized Steel Wire from the People's Republic of China: Post-Preliminary Analysis Memorandum,'' dated January 17, 2012.

[7] AMH's and Petitioners comments on the scope of the investigation are fully addressed in *Galvanized Steel Wire from the People's Republic of China: Final Determination of Sales at Less Than Fair Value* and accompanying Issues and Decision Memorandum at Comment 3, issued concurrently with this final determination.

[8] These comments are fully addressed in *Notice of Final Determination of Sales at Less Than Fair Value: Galvanized Steel Wire from Mexico* and accompanying Issues and Decision Memorandum at Comments 3 and 4, issued concurrently with this final determination.

Determination in the Countervailing Duty Investigation of Galvanized Steel Wire from the People's Republic of China (Decision Memorandum), which is hereby adopted by this notice. A list of the subsidy programs and the issues that parties raised and to which we responded in the Decision Memorandum is attached to this notice as Appendix II. The Decision Memorandum is a public document, which is on file electronically via IA ACCESS. In addition, a complete version of the Decision Memorandum is also accessible on the Web at *http://ia.ita.doc.gov/frn/*. The signed Decision Memorandum and the electronic versions of the Decision Memorandum are identical in content.

Use of Facts Otherwise Available, Including Adverse Inferences

For purposes of this final determination, we have continued to rely on facts available and have continued to apply adverse inferences in accordance with sections 776(a) and (b) of the Tariff Act of 1930, as amended (the Act) with regard to: (1) The CVD rate to be applied to the non-cooperative mandatory company respondent, Hualing; (2) whether the wire rod and zinc input producers at issue are government authorities that provide wire rod and zinc for less than adequate remuneration (LTAR); and, (3) the GOC's provision of electricity for LTAR. In addition, for the purposes of this final determination, we are also applying adverse facts available (AFA) to (1) determine the CVD rate to be applied to the non-cooperating mandatory respondents the Huayuan Companies and M&M, and (2) determine that the Zhabei District ''Save Energy Reduce Emission Team'' award is specific pursuant to sections 776(a) and (b) of the Act. A full discussion of our decision to apply AFA is presented in the Decision Memorandum under the section ''Use of Facts Otherwise Available and Adverse Inferences.''

Suspension of Liquidation

In accordance with section 703(d)(1)(A)(i) of the Act, we have calculated a rate for each individually investigated producer/exporter of the subject merchandise. Section 705(c)(5)(A)(i) of the Act states that for companies not investigated, we will determine an ''all-others'' rate equal to the weighted average countervailable subsidy rates established for exporters and producers individually investigated, excluding any zero and *de minimis* countervailable subsidy rates, and any rates determined entirely under section 776 of the Act.

In this investigation, the only rate not based entirely on AFA is the rate calculated for the Bao Zhang Companies. Consequently, the rate calculated for the Bao Zhang Companies is also assigned as the ''all-others'' rate. For those non-cooperative companies that did not fully participate in this investigation, we have determined rates based solely on AFA, in accordance with sections 776(a) and (b) of the Act.[9] Therefore, we determine the total estimated net countervailable subsidy rates to be:

Company	*Ad Valorem* net subsidy rate (percent)
M&M Industries Co. Ltd	223.27
Shandong Hualing Hardware and Tool Co., Ltd.	223.27
Shanghai Bao Zhang Industry Co. Ltd., Anhui Bao Zhang Metal Products Co., Ltd., and Shanghai Li Chao Industry Co., Ltd. (collectively the Bao Zhang Companies)	19.06
Tianjin Huayuan Metal Wire Products Co., Ltd., Tianjin Tianxin Metal Products Co., Ltd., and Tianjin Mei Jia Hua Trade Co., Ltd. (collectively, the Huayuan Companies)	223.27
All Others Rate	19.06

As a result of our *Preliminary Determination* and pursuant to section 703(d) of the Act, we instructed U.S. Customs and Border Protection (CBP) to suspend liquidation of all entries of subject merchandise from the PRC which were entered or withdrawn from warehouse, for consumption on or after September 6, 2011, the date of the publication of the *Preliminary Determination* in the **Federal Register**. In accordance with section 703(d) of the Act, we later issued instructions to CBP to discontinue the suspension of liquidation for CVD purposes for subject merchandise entered, or withdrawn from warehouse, on or after January 4, 2012, but to continue the suspension of liquidation of all entries from September 6, 2011, through January 3, 2012.

We will issue a CVD order and reinstate the suspension of liquidation under section 706(a) of the Act if the U.S. International Trade Commission (ITC) issues a final affirmative injury determination, and will require a cash deposit of estimated CVDs for such entries of merchandise in the amounts indicated above. If the ITC determines that material injury, or threat of material injury, does not exist, this proceeding will be terminated and all estimated duties deposited or securities posted as a result of the suspension of liquidation will be refunded or canceled.

ITC Notification

In accordance with section 705(d) of the Act, we will notify the ITC of our determination. In addition, we are making available to the ITC all non-privileged and non-proprietary information related to this investigation. We will allow the ITC access to all privileged and business proprietary information in our files, provided the ITC confirms that it will not disclose such information, either publicly or under an administrative protective order (APO), without the written consent of the Assistant Secretary for Import Administration.

Return or Destruction of Proprietary Information

In the event that the ITC issues a final negative injury determination, this notice will serve as the only reminder to parties subject to an APO of their responsibility concerning the destruction of proprietary information disclosed under APO in accordance with 19 CFR 351.305(a)(3). Timely written notification of the return/destruction of APO materials or conversion to judicial protective order is hereby requested. Failure to comply with the regulations and terms of an APO is a violation which is subject to sanction.

[9] *See* ''Non-Cooperative Companies'' in the ''Use of Facts Otherwise Available and Adverse Inferences'' section of the Decision Memorandum.

This determination is issued and published pursuant to sections 705(d) and 777(i) of the Act.

Dated: March 19, 2012.

Paul Piquado,

Assistant Secretary for Import Administration.

Appendix I

Scope of Investigation

The scope of this investigation covers galvanized steel wire which is a cold-drawn carbon quality steel product in coils, of circular or approximately circular, solid cross section with any actual diameter of 0.5842 mm (0.0230 inch) or more, plated or coated with zinc (whether by hot-dipping or electroplating).

Steel products to be included in the scope of this investigation, regardless of Harmonized Tariff Schedule of the United States (HTSUS) definitions, are products in which: (1) iron predominates, by weight, over each of the other contained elements; (2) the carbon content is two percent or less, by weight; and (3) none of the elements listed below exceeds the quantity, by weight, respectively indicated:

—1.80 percent of manganese, or
—1.50 percent of silicon, or
—1.00 percent of copper, or
—0.50 percent of aluminum, or
—1.25 percent of chromium, or
—0.30 percent of cobalt, or
—0.40 percent of lead, or
—1.25 percent of nickel, or
—0.30 percent of tungsten, or
—0.02 percent of boron, or
—0.10 percent of molybdenum, or
—0.10 percent of niobium, or
—0.41 percent of titanium, or
—0.15 percent of vanadium, or
—0.15 percent of zirconium.

Specifically excluded from the scope of this investigation is galvanized steel wire in coils of 15 feet or less which is pre-packed in individual retail packages. The products subject to this investigation are currently classified in subheadings 7217.20.30, 7217.20.45, or 7217.90.10 of the HTSUS which cover galvanized wire of all diameters and all carbon content. Galvanized wire is reported under statistical reporting numbers 7217.20.3000, 7217.20.4510, 7217.20.4520, 7217.20.4530, 7217.20.4540, 7217.20.4550, 7217.20.4560, 7217.20.4570, 7217.20.4580, and 7217.90.1000. These products may also enter under HTSUS subheadings 7229.20.0015, 7229.20.0090, 7229.90.5008, 7229.90.5016, 7229.90.5031, and 7229.90.5051. Although the HTSUS subheadings are provided for convenience and Customs purposes, the written description of the merchandise is dispositive.

Appendix II

Decision Memorandum

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7. Provision of Land Use Rights for LTAR to Enterprises Within the Zhaoqing High-Tech Industry Development Zone in Guangdong Province
8. Provision of Land Use Rights for LTAR to Enterprises Within the South Sanshui Science and Technology Industrial Park of Foshan City
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Comment 11: Whether the Department Should Apply the Same Electricity Benchmark to both ABZ and SBZ
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VI. Recommendation

[FR Doc. 2012–7214 Filed 3–23–12; 8:45 am]

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DEPARTMENT OF COMMERCE

International Trade Administration

[A–201–839]

Notice of Final Determination of Sales at Less Than Fair Value and Affirmative Critical Circumstances Determination: Bottom Mount Combination Refrigerator-Freezers From Mexico

AGENCY: Import Administration, International Trade Administration, Department of Commerce.

SUMMARY: We determine that imports of bottom mount combination refrigerator-freezers (bottom mount refrigerators) from Mexico are being, or are likely to be, sold in the United States at less than fair value (LTFV), as provided in section 735 of the Tariff Act of 1930, as amended (the Act). In addition, we determine that critical circumstances exist with respect to the subject merchandise exported from Mexico by Samsung Electronics Mexico, S.A. de C.V. (Samsung).

Based on our analysis of the comments received, we made changes in the margin calculations. Therefore, the final determination differs from the preliminary determination. The final weighted-average dumping margins for the investigated companies are listed below in the section entitled ''Final Determination Margins.''

DATES: *Effective Date:* March 26, 2012.

FOR FURTHER INFORMATION CONTACT: David Goldberger or Katherine Johnson, AD/CVD Operations, Office 2, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue NW., Washington, DC 20230; telephone: (202) 482–4136 and (202) 482–4929, respectively.

SUPPLEMENTARY INFORMATION:

Background

On November 2, 2011, the Department published in the **Federal Register** the preliminary determination of sales at LTFV in the antidumping duty investigation of bottom mount refrigerators from Mexico.[1] Since the preliminary determination, the following events have occurred.

In November 2011, we issued supplemental questionnaires to, and received responses from, all four respondents: Electrolux Home Products Corp. NV/Electrolux Home Products De Mexico, S.A. de C.V. (Electrolux), LG Electronics Monterrey Mexico, S.A. de C.V. (LGEMM), Controladora Mabe, S.A. de C.V./Mabe, S.A. de C.V. (Mabe), and Samsung. Also, in November 2011, we received updated shipment information for our critical circumstances analysis from Electrolux, LGEMM, and Samsung.

On December 5, 2011, Whirlpool Corporation (hereafter, the petitioner) amended its targeted dumping allegation with respect to Samsung to reflect the revised U.S. sales data submitted by Samsung in response to the Department's November 2011, supplemental questionnaire.

In November and December 2011, we verified the questionnaire responses of the four respondents in this case, in accordance with section 782(i) of the Act. In December, January and February 2012, we issued our verification findings for each respondent.[2]

In February 2012, the Department requested, and the respondents submitted, revised U.S. and/or comparison-market sales listings to reflect certain verification findings.

Also, in February 2012, the petitioner and the respondents (except for Electrolux) submitted case and rebuttal briefs. On February 22, 2012, the Government of Mexico submitted comments on certain aspects of the Department's preliminary determination. On February 24, 2012, the Department held a hearing in this case.

Subsequent to the *Preliminary Determination,* the Department revised the computer programs used to calculate the respondents' dumping margins to ensure that they accurately reflected the methodological choices made in that determination. These revisions to the programming, had they been included in the preliminary determination, would not have altered the weighted-average dumping margins calculated there. *See* March 16, 2012, Memoranda to The File entitled ''Final Determination Margin Calculation for LG Electronics Monterrey Mexico, S.A. de C.V. (LGEMM)'' (LGEMM Calculation Memo); ''Final Determination Margin Calculation for Samsung Electronics Mexico S.A. de C.V. (SEM)'' (Samsung Calculation Memo); ''Final Determination Margin Calculation for Electrolux Home Products, Corp. N.V./ Electrolux Home Products de Mexico, S.A. de C.V'' (Electrolux Calculation Memo); and ''Final Determination Margin Calculation for Controladora Mabe S.A. de C.V., Mabe S.A. de C.V., and Leiser S. de R.L. (collectively, Mabe),'' which contain the revised preliminary antidumping duty margin program log and output for each respondent.

Period of Investigation

The period of investigation (POI) is January 1, 2010, through December 31, 2010.

[1] *See Notice of Preliminary Determination of Sales at Less Than Fair Value, Postponement of Final Determination, and Affirmative Critical Circumstances Determination: Bottom Mount Combination Refrigerator-Freezers from Mexico,* 76 FR 67688 (Nov. 2, 2011) (*Preliminary Determination*).

[2] *See* Memorandum to The File entitled ''Verification of the Cost Response of Electrolux Home Products, Corp. N.V. and Electrolux Home Products, Inc. (collectively ''Electrolux'') in the Antidumping Investigation of Bottom Mount. Combination Refrigerator-Freezers from Mexico,'' dated December 22, 2011; Memorandum to The File entitled ''Verification of the Sales Response of Electrolux Home Products, Corp. N.V. and Electrolux Home Products, Inc. (collectively ''Electrolux'') in the Antidumping Duty Investigation of Bottom Mount Combination Refrigerator-Freezers (BMRFs) from Mexico,'' dated February 1, 2012; Memorandum to The File entitled ''Verification of the Cost Response of LG Electronics, Inc. in the Antidumping Investigation of Bottom-Mount Combination Refrigerator-Freezers from the Republic of Korea, dated December 22, 2011; Memorandum to the File entitled ''Verification of the Cost Response of LG Electronics Monterrey Mexico, S.A. de C.V. in the Antidumping Investigation of Bottom Mount Combination Refrigerator-Freezers from Mexico,'' dated December 22, 2011; Memorandum to The File entitled ''Verification of the Third Country Sales Response of LG Electronics Monterrey Mexico, S.A, de C.V, and LG Electronics Canada,'' February 1, 2012; Memorandum to The File entitled ''Verification of the U.S. Sales Response of LG Electronics Monterrey Mexico, S.A. de C.V. and LG Electronics USA, Inc.,'' dated February 2, 2012; Memorandum to the File entitled ''Verification of the Sales Response of Samsung Electronics Co., Ltd in the Less-Than-Fair-Value Investigation of Bottom-Mount Refrigerator-Freezers from Korea,'' dated February 2, 2012; Memorandum to the File entitled ''Verification of the Cost Response of Controladora Mabe S.A. de C.V. Mabe S.A. de C.V., and Leiser S. de R.L. in the Antidumping Investigation of Bottom-Mount Combination Refrigerator-Freezers from Mexico,'' dated January 4, 2012; Memorandum to The File entitled ''Verification of the Sales Responses of General Electric Company,'' dated January 13, 2012; Memorandum to The File entitled ''Verification of the Sales Responses of Controladora Mabe S.A. de C.V., and Mabe S.A. de C.V. (collectively, ''Mabe''),'' dated January 25, 2012; Memorandum to The File entitled ''Verification of the Cost Response of Samsung Electronics Mexico S.A. de C.V. in the Less-Than-Fair-Value Investigation of Bottom Mount Combination Refrigerator-Freezers from Mexico'', dated December 21, 2011; Memorandum to The File entitled ''Verification of the U.S. Sales Response of Samsung Electronics Mexico, S.A. de C.V.,'' dated January 9, 2012; and Memorandum to The File entitled ''Verification of Samsung Electronics America Inc.,'' dated January 26, 2012.

Scope of Investigation

The products covered by the investigation are all bottom mount combination refrigerator-freezers and certain assemblies thereof from Mexico. For purposes of the investigation, the term ''bottom mount combination refrigerator-freezers'' denotes freestanding or built-in cabinets that have an integral source of refrigeration using compression technology, with all of the following characteristics:

- The cabinet contains at least two interior storage compartments accessible through one or more separate external doors or drawers or a combination thereof;
- An upper-most interior storage compartment(s) that is accessible through an external door or drawer is either a refrigerator compartment or convertible compartment, but is not a freezer compartment;[3] and
- There is at least one freezer or convertible compartment that is mounted below an upper-most interior storage compartment(s).

For purposes of the investigation, a refrigerator compartment is capable of storing food at temperatures above 32 degrees F (0 degrees C), a freezer compartment is capable of storing food at temperatures at or below 32 degrees F (0 degrees C), and a convertible compartment is capable of operating as either a refrigerator compartment or a freezer compartment, as defined above.

Also covered are certain assemblies used in bottom mount combination refrigerator-freezers, namely: (1) Any assembled cabinets designed for use in bottom mount combination refrigerator-freezers that incorporate, at a minimum: (a) an external metal shell, (b) a back panel, (c) a deck, (d) an interior plastic liner, (e) wiring, and (f) insulation; (2) any assembled external doors designed for use in bottom mount combination refrigerator-freezers that incorporate, at a minimum: (a) an external metal shell, (b) an interior plastic liner, and (c) insulation; and (3) any assembled external drawers designed for use in bottom mount combination refrigerator-freezers that incorporate, at a minimum: (a) an external metal shell, (b) an interior plastic liner, and (c) insulation.

The products subject to the investigation are currently classifiable under subheadings 8418.10.0010, 8418.10.0020, 8418.10.0030, and 8418.10.0040 of the Harmonized Tariff System of the United States (HTSUS). Products subject to this investigation may also enter under HTSUS subheadings 8418.21.0010, 8418.21.0020, 8418.21.0030, 8418.21.0090, and 8418.99.4000, 8418.99.8050, and 8418.99.8060. Although the HTSUS subheadings are provided for convenience and customs purposes, the written description of the merchandise subject to this scope is dispositive.

[3] The existence of an interior sub-compartment for ice-making in an upper-most storage compartment does not render an upper-most storage compartment a freezer compartment.

Scope Comments

In the *Preliminary Determination,* we did not modify the description of the scope of this investigation in the manner requested by certain interested parties. Specifically, we did not modify the scope to be consistent with the Association of Home Appliance Manufacturers (AHAM) definition, nor did we exclude kimchi refrigerators or Quatro Cooling Refrigerators from the scope. We did, however, clarify the scope to eliminate any ambiguity with respect to the inclusion of Quatro Cooling Refrigerators in the scope of the investigation. *See Preliminary Determination,* 76 FR at 67690–67691. No party commented on our preliminary scope determination. Therefore, we made no further changes to the description of the scope, as stated in the *Preliminary Determination.*

Analysis of Comments Received

All issues raised in the case and rebuttal briefs by parties in this investigation are addressed in the Issues and Decision Memorandum (Decision Memorandum), which is adopted by this notice. A list of the issues raised is attached to this notice as Appendix I. The Decision Memorandum is a public document and is on file electronically via Import Administration's Antidumping and Countervailing Duty Centralized Electronic Service System (IA ACCESS). Access to IA ACCESS is available in the Central Records Unit (CRU), room 7046 of the main Department of Commerce building. In addition, a complete version of the Decision Memorandum can be accessed directly on the internet at *http://www.trade.gov/ia/*. The signed Decision Memorandum and the electronic version of the Decision Memorandum are identical in content.

Verification

As provided in section 782(i) of the Act, we verified the sales and cost information submitted by the respondents for use in our final determination. We used standard verification procedures including an examination of relevant accounting and production records, and original source documents provided by the respondents.

Changes Since the Preliminary Determination

Based on our analysis of the comments received and our findings at verification, we made certain changes to the margin calculations for each respondent. For a discussion of these changes, see the ''Margin Calculations'' section of the Decision Memorandum.

Cost of Production

As discussed in the *Preliminary Determination,* we conducted an investigation to determine whether the respondents made comparison-market sales of the foreign like product during the POI at prices below their cost of production (COP) within the meaning of section 773(b) of the Act. *See Preliminary Determination,* 76 FR at 67698–67699. For this final determination, we performed the cost test following the same methodology as in the *Preliminary Determination,* after making certain adjustments to the reported comparison-market cost and sales data based on our analysis of the comments received and our findings at verification, where appropriate.

We found that 20 percent or more of each respondent's sales of a given product during the POI were at prices less than the weighted-average COP for this period. Thus, we determined that these below-cost sales were made in ''substantial quantities'' within an extended period of time and at prices which did not permit the recovery of all costs within a reasonable period of time in the normal course of trade. *See* sections 773(b)(1)–(2) of the Act.

Therefore, for purposes of this final determination, we found that each respondent made below-cost sales not in the ordinary course of trade. Consequently, we disregarded these sales and used the remaining sales as the basis for determining normal value for each respondent pursuant to section 773(b)(1) of the Act.

MNC Provision

As we discussed in the *Preliminary Determination,* we applied the Special Rule for Certain Multinational Corporations (MNC Provision) in the calculation of normal value (NV) for LGEMM because, based on the record evidence, LGEMM satisfied each of the three criteria enumerated under section 773(d) of the Act. In so doing, we based NV for LGEMM on the prices of sales made by LG Electronics, Inc. (LGE) in Korea. *See Preliminary Determination,* 76 FR at 67692–67693.

We have continued to apply the MNC Provision to the calculation of LGEMM's NV for purposes of the final determination because all three criteria enumerated in the Act have been met. Specifically, we verified that LGEMM is owned in part by LGE, which produces bottom mount refrigerators, and that LGEMM's home market sales are not viable for comparison to its U.S. sales. Furthermore, using the same methodology as that employed in the *Preliminary Determination,* after taking into account adjustments made to LGEMM's and LGE's sales and cost data based on our analysis of other comments received and our findings at verification, we continue to find that the NV of the foreign like product produced in Korea is higher than the NV of the foreign like product produced in Mexico. Therefore, we compared LGEMM's U.S. prices to the prices of sales made by LGE in Korea. For further discussion of this issue, *see Comment 3* of the Decision Memorandum.

Targeted Dumping

The Act allows the Department to employ the average-to-transaction margin calculation methodology under the following circumstances: (1) There is a pattern of export prices that differ significantly among purchasers, regions or periods of time; and (2) The Department explains why such differences cannot be taken into account using the average-to-average or transaction-to-transaction methodology. *See* section 777A(d)(1)(B) of the Act.

In the *Preliminary Determination,* we conducted time-period targeted dumping analyses for Electrolux, LGEMM, and Samsung based on timely allegations of targeted dumping filed by the petitioner, using the methodology adopted in *Certain Steel Nails From the United Arab Emirates: Notice of Final Determination of Sales at Not Less Than Fair Value,* 73 FR 33985 (June 16, 2008), and *Certain Steel Nails From the People's Republic of China: Final Determination of Sales at Less Than Fair Value and Partial Affirmative Determination of Critical Circumstances,* 73 FR 33977 (June 16, 2008) (*Nails*), and applied in more recent investigations.[4] As a result, we preliminarily determined that there was a pattern of U.S. prices for comparable merchandise that differed significantly among certain time periods for Samsung and LGEMM, in accordance with section 777A(d)(1)(B)(i) of the Act. We also preliminarily determined that no such pattern existed for Electrolux.

Furthermore, for Samsung, we found that the standard average-to-average methodology took into account the price differences because the alternative average-to-transaction methodology yielded no difference in the margin or yielded a difference in the margin that was so insignificant relative to the size of the resulting margin as to be immaterial. Accordingly, we preliminarily applied the standard average-to-average methodology to all U.S. sales made by Samsung. For LGEMM, we found that that the standard average-to-average methodology did not take into account the price differences because the alternative average-to-transaction methodology yielded a material difference in the margin. Accordingly, we preliminarily applied the average-to-transaction methodology to all U.S. sales made by LGEMM. For Electrolux, because we did not find a pattern of prices that differed significantly for certain time periods, we applied our standard average-to-average price comparison methodology to all U.S. sales made by Electrolux. *See Preliminary Determination* at 76 FR 67691–67692.

For purposes of the final determination, we performed our targeted-dumping analysis following the methodology employed in the *Preliminary Determination,* after taking into account the petitioner's revised targeted dumping allegation with respect to Samsung, and making certain revisions to Electrolux's, LGEMM's and Samsung's reported U.S. sales data based on verification findings and our evaluation of other comments submitted by the parties, as enumerated in the ''Margin Calculations'' section of the Decision Memo. In so doing, we found that the results of our final targeted-dumping analysis were consistent with those of our preliminary targeted-dumping analysis with respect to Electrolux. Therefore, we continued to apply the standard average-to-average methodology to all of Electrolux's U.S. sales. For Samsung and LGEMM, while we found a pattern of price differences that differed significantly for certain time periods pursuant to section 777A(d)(1)(B) of the Act, we determined that the differences can be taken into account using the average-to-average methodology. Therefore, we applied the standard average-to-average methodology to all U.S. sales made by Samsung and LGEMM. *See* LGEMM Calculation Memo, Samsung Calculation Memo, and Electrolux Calculation Memo. For further discussion, *see Comment 2* of the Decision Memorandum.

Critical Circumstances

In the *Preliminary Determination,* we found that critical circumstances exist with respect to imports of the subject merchandise from Samsung but not with respect to imports of subject merchandise from Electrolux or LGEMM.[5] *See Preliminary Determination,* 76 FR at 67701–67702. Samsung objected to our preliminary affirmative critical circumstances determination with respect to it, arguing among other things, that its imports have not been massive since the filing of the petition.

In conducting our critical circumstances analysis for the final determination, we relied on updated shipment data provided by Electrolux, LGEMM, and Samsung which we examined at verification. Based on our analysis of these data and the criteria enumerated under section 735(a)(3) of the Act, we continue to find that critical circumstances exist only with respect to imports of bottom mount refrigerators from Samsung, as explained below.

Section 735(a)(3) of the Act provides that the Department will determine that critical circumstances exist if there is a reasonable basis to believe or suspect that: (A)(i) There is a history of dumping and material injury by reason of dumped imports in the United States or elsewhere of the subject merchandise; or (ii) the person by whom, or for whose account, the merchandise was imported knew or should have known that the exporter was selling the subject merchandise at less than its fair value and that there was likely to be material injury by reason of such sales; and (B) there have been massive imports of the subject merchandise over a relatively short period. Section 351.206(h)(1) of the Department's regulations provides that, in determining whether imports of the subject merchandise have been ''massive,'' the Department normally will examine: (i) the volume and value of the imports; (ii) seasonal trends; and (iii) the share of domestic consumption accounted for by the imports. In addition, 19 CFR 351.206(h)(2) provides that an increase in imports of 15 percent during the ''relatively short period'' of time may be considered ''massive.''

[4] These investigations include *Certain Coated Paper Suitable for High-Quality Print Graphics Using Sheet-Fed Presses From Indonesia: Final Determination of Sales at Less Than Fair Value,* 75 FR 59223 (Sept. 27, 2010) and accompanying Issues and Decision Memorandum at Comment 1, and *Multilayered Wood Flooring From the Peoples' Republic of China: Final Determination of Sales at Less Than Fair Value,* 76 FR 64318 (Oct. 18, 2011) and accompanying Issues and Decision Memorandum at Comment 4.

[5] The petitioner did not make a critical circumstances allegation with respect to imports from Mabe or All Others.

Section 351.206(i) of the Department's regulations defines ''relatively short period'' as normally being the period beginning on the date the proceeding begins (*i.e.,* the date the petition is filed) and ending at least three months later. The regulations also provide, however, that if the Department finds that importers, exporters, or producers had reason to believe, at some time prior to the beginning of the proceeding, that a proceeding was likely, the Department may consider a period of not less than three months from that earlier time.

In determining whether the above criteria have been satisfied, we examined: (1) The evidence placed on the record by the respondents and the petitioner; and (2) the International Trade Commission's (ITC's) preliminary determination of injury (*see Bottom Mount Refrigerator Freezers from Mexico and Korea, Investigation Nos. 701–TA–477 and 731–TA–1180–1181* (Preliminary), 76 FR 29791 (May 23, 2011) (*ITC Preliminary Determination*)).

To determine whether there is a history of injurious dumping of the merchandise under investigation, in accordance with section 735(a)(3)(A)(i) of the Act, the Department normally considers evidence of an existing antidumping duty order on the subject merchandise in the United States or elsewhere to be sufficient.[6] As mentioned in the *Preliminary Determination,* the petitioner did not identify any proceeding with respect to bottom mount refrigerators from Mexico, nor are we aware of any existing antidumping duty order in any country on bottom mount refrigerators from Mexico. For this reason, the Department does not find a history of injurious dumping of the subject merchandise from Mexico pursuant to section 735(a)(3)(A)(i) of the Act.

To determine whether the person by whom, or for whose account, the merchandise was imported knew or should have known that the exporter was selling the subject merchandise at LTFV, and that there was likely to be material injury by reason of such sales in accordance with section 735(a)(3)(A)(ii) of the Act, the Department normally considers margins of 25 percent or more for export price (EP) sales or 15 percent or more for constructed export price (CEP) transactions sufficient to impute knowledge of dumping.[7]

Electrolux made only CEP sales and the vast majority of LGEMM's sales are CEP. Samsung had both EP and CEP sales, a majority of which are CEP sales. The final dumping margins calculated for Electrolux, LGEMM, and Samsung exceed the threshold sufficient to impute knowledge of dumping (*i.e.,* 15 percent for CEP sales). Therefore, we determine that there is sufficient basis to find that importers should have known that each of these companies was selling the subject merchandise at LTFV pursuant to section 735(a)(3)(A)(ii) of the Act. In determining whether an importer knew or should have known that there was likely to be material injury by reason of dumped imports, the Department normally will look to the preliminary injury determination of the ITC. If the ITC finds a reasonable indication of present material injury to the relevant U.S. industry, the Department will determine that a reasonable basis exists to impute importer knowledge that material injury is likely by reason of such imports. *See e.g., Certain Orange Juice from Brazil.* In the present case, the ITC preliminarily found reasonable indication that an industry in the United States is materially injured by imports of bottom mount refrigerators from Mexico. *See ITC Preliminary Determination.* Based on the ITC's preliminary determination of injury, and the final antidumping margins for Electrolux, LGEMM, and Samsung, the Department finds that there is a reasonable basis to conclude that the importer knew or should have known that there was likely to be injurious dumping of subject merchandise for these companies.

In determining whether there are ''massive imports'' over a ''relatively short period,'' pursuant to section 735(a)(3)(B) of the Act, the Department normally compares the import volumes of the subject merchandise for at least three months immediately preceding the filing of the petition (*i.e.,* the base period) to a comparable period of at least three months following the filing of the petition (*i.e.,* the comparison period). Accordingly, in determining whether imports of the subject merchandise have been massive, we based our analysis for each of the three companies on shipment data for comparable seven-month periods preceding and following the filing of the petition.

Specifically, the Department requested and obtained from each of the respondents monthly shipment data from January 2008 to October 2011. To determine whether imports of subject merchandise have been massive over a relatively short period, we compared, pursuant to 19 CFR 351.206(h)(1)(i), the respondents' export volumes for the seven months before the filing of the petition (*i.e.,* September 2010–March 2011) to those during the seven months after the filing of the petition (*i.e.,* April through October 2011). These periods were selected based on the Department's practice of using the longest period for which information is available up to the date of the preliminary determination.[8] According to the monthly shipment information, we found the volume of shipments of bottom mount refrigerators increased by more than 15 percent for Electrolux, LGEMM, and Samsung.

For purposes of our ''massive imports'' determination, we also considered the impact of seasonality on imports of bottom mount refrigerators based on interested party comments and information contained in the ITC's preliminary determination. In order to determine whether the seasonality factor accounted for the increase in imports observed for each of the respondents in the post-petition filing period (the comparison period), we analyzed company-specific shipment data for a historical three-year period, where possible, using the same base and comparison time periods noted above. As a result of this analysis, we found that there is a consistent pattern of seasonality in the industry, and that seasonal trends account for the increase in imports subsequent to the filing of the petition from each of the respondents except one. Specifically, with respect to Electrolux and LGEMM, we found that the percentage increase in shipments during the comparison period is not related to the filing of the petition but rather to the consistent seasonal trends in the industry because shipments during the April–October time period were consistently higher than those in the September–March

[6] *See e.g., Certain Magnesia Carbon Bricks From the People's Republic of China: Notice of Preliminary Affirmative Determination of Critical Circumstances,* 75 FR 28237 (May 20, 2010), unchanged in *Certain Magnesia Carbon Bricks From the People's Republic of China: Final Determination of Sales at Less Than Fair Value and Critical Circumstances* 75 FR 45468 (August 2, 2010).

[7] *See e.g., Notice of Preliminary Determination of Sales at Less Than Fair Value, Postponement of Final Determination, and Affirmative Preliminary Critical Circumstances Determination: Certain Orange Juice from Brazil,* 70 FR 49557 (August 24, 2005), unchanged in *Notice of Final Determination of Sales at Less than Fair Value and Affirmative Final Determination of Critical Circumstances: Certain Orange Juice from Brazil,* 71 FR 2183 (January 13, 2006) (*Certain Orange Juice from Brazil*).

[8] *See e.g., Notice of Preliminary Determination of Sales at Less Than Fair Value and Postponement of Final Determination: Silicon Metal From the Russian Federation,* 67 FR 59253, 59256 (Sept. 20, 2002), unchanged in *Notice of Final Determination of Sales at Less Than Fair Value: Silicon Metal From the Russian Federation,* 68 FR 6885 (February 11, 2003).

time period from year to year, and the shipment increases observed in the April–October time period from year to year decreased. Therefore, for purposes of the final determination, we find that imports from these companies during the period after the filing of the petition have not been massive in accordance with section 735(a)(3)(B) of the Act. However, with respect to Samsung, we found that the percentage increase in shipments during the comparison period is not related to seasonal trends but associated with the filing of the petition because shipments in the April–October 2010 time period were lower than those in the September 2009–March 2010 time period, and the shipment increase observed in the April–October period between 2010 and 2011 was substantial. Accordingly, for purposes of the final determination, we find that imports from Samsung during the period after the filing of the petition have been massive in accordance with section 735(a)(3)(B) of the Act.

In summary, we find that there is a reasonable basis to believe or suspect importers had knowledge of dumping and the likelihood of material injury with respect to bottom mount refrigerators produced and exported from Mexico by Electrolux, LGEMM, and Samsung. In addition, we find that there have been massive imports of bottom mount refrigerators over a relatively short period from Samsung, irrespective of seasonality. However, we do not find that there have been massive imports of bottom mount refrigerators over a relatively short period from Electrolux and LGEMM due to seasonality. Therefore, for the reasons stated above, the Department finds that critical circumstances do not exist for imports of the subject merchandise from Electrolux and LGEMM, but continues to find that critical circumstances exist for imports of the subject merchandise from Samsung in the final determination. For a complete discussion of our final critical circumstances analysis, see the Decision Memorandum at Comment 34 and the March 16, 2012, Memorandum to James P. Maeder, Jr., Director, Office 2, from The Team entitled, ''Antidumping Duty Investigation of Certain Bottom Mount Refrigerator Freezers from Mexico—Final Determination of Critical Circumstances.''

Continuation of Suspension of Liquidation

Pursuant to 735(c)(1)(B) of the Act, we will instruct U.S. Customs and Border Protection (CBP) to continue to suspend liquidation of all entries of subject merchandise from Mexico, produced/exported by Electrolux, LGEMM, Mabe, and ''All Others'' and entered, or withdrawn from warehouse, for consumption on or after November 2, 2011, the date of publication of the preliminary determination in the **Federal Register**. Pursuant to 735(c)(1)(B) of the Act, we will instruct U.S. Customs and Border Protection (CBP) to continue to suspend liquidation of all entries of subject merchandise from Mexico, produced/exported by Samsung and entered, or withdrawn from warehouse, for consumption on or after August 4, 2011, which is 90 days prior to the date of publication of the preliminary determination in the **Federal Register**, *i.e.,* November 2, 2011. CBP shall require a cash deposit or the posting of a bond equal to the estimated amount by which the normal value exceeds the U.S. price as shown below. These instructions suspending liquidation will remain in effect until further notice.

Final Determination Margins

The weighted-average dumping margins are as follows:

Exporter/manufacturer	Weighted-Average margin percentage	Critical circumstances
Electrolux Home Products, Corp. NV/Electrolux Home Products De Mexico, S.A. de C.V	22.94	No.
LG Electronics Monterrey Mexico, S.A. de C.V.	30.34	No.
Controladora Mabe S.A. de C.V./Mabe S.A. de C.V.	6.00	NA.
Samsung Electronics Mexico, S.A. de C.V.	15.95	Yes.
All Others	20.26	NA.

''All Others'' Rate

In accordance with section 735(c)(5)(A) of the Act, we based the ''All Others'' rate on the weighted average of the dumping margins calculated for the exporters/manufacturers investigated in this proceeding. The ''All Others'' rate is calculated exclusive of all *de minimis* margins and margins based entirely on AFA.

Disclosure

We will disclose the calculations performed within five days of the date of publication of this notice to parties in this proceeding in accordance with 19 CFR 351.224(b).

ITC Notification

In accordance with section 735(d) of the Act, we notified the ITC of our final determination. As our final determination is affirmative, the ITC will determine within 45 days whether imports of the subject merchandise are causing material injury, or threat of material injury, to an industry in the United States. If the ITC determines that material injury or threat of injury does not exist, the proceeding will be terminated and all securities posted will be refunded or canceled. If the ITC determines that such injury does exist, the Department will issue an antidumping duty order directing CBP to assess antidumping duties on all imports of the subject merchandise entered, or withdrawn from warehouse, for consumption on or after the effective date of the suspension of liquidation.

Return or Destruction of Proprietary Information

This notice will serve as the only reminder to parties subject to administrative protective order (APO) of their responsibility concerning the destruction of proprietary information disclosed under APO in accordance with 19 CFR 351.305(a)(3). Timely written notification of return/destruction of APO materials or conversion to judicial protective order is hereby requested. Failure to comply with the regulations and the terms of an APO is a sanctionable violation.

We are issuing and publishing this determination and notice in accordance with sections 735(d) and 777(i) of the Act.

Dated: March 16, 2012.

Paul Piquado,

Assistant Secretary for Import Administration.

Appendix—Issues in Decision Memorandum

General Issues

1. Targeted Dumping

2. Zeroing in Average-to-Transaction Comparisons

Company-Specific Issues

LGEMM

3. Application of MNC Provision
4. Lump Sum and Sell-Out Rebates on U.S. Sales
5. Non-Product-Specific Accrual Rebates on U.S. Sales
6. Warehouse-to-Customer U.S. Inland Freight Expenses
7. Billing Adjustments on U.S. Sales
8. Interest Rate for U.S. Inventory Carrying Costs
9. Payment Dates on Certain U.S. Sales
10. Payment Dates on Certain Canadian Sales
11. Lump Sum and Sell-Out Rebates on Canadian Sales
12. Direct Advertising Expense Ratio for Canadian Sales
13. Conversion Cost Allocation Error
14. Research and Development Costs
15. Global Costs
16. Affiliated Party Input Purchases

Samsung

17. Corrections Presented at Start of Sales Verifications
18. U.S. Rebates
19. CEP Offset
20. The Denominator for Certain Selling Expense Ratios
21. U.S. Indirect Selling Expenses
22. Classification of Certain Costs as Packaging or Packing
23. Treatment of Payments for Defective Merchandise
24. Unreported Bank Charges
25. Comparison Market Viability
26. Calculation of CV Selling Expenses and Profit
27. Research and Development Costs
28. Certain Affiliated Party Purchases
29. Affiliated Party Compressors Purchases
30. Erroneously Reported Input Quantities
31. General and Administrative Expense Ratio
32. Interest Expense Offset
33. Understatement of Input Freight Costs
34. Critical Circumstances

Mabe

35. Costs Excluded From Cost of Production
36. Fees Related to Agreements Between Mabe and GEA
37. U.S. Indirect Selling Expenses
38. U.S. Rebates
39. U.S. Advertising Expenses
40. Cost Verification Corrections
41. Home Market Rebate Identified at Verification

Electrolux

42. Verification Findings

[FR Doc. 2012–7271 Filed 3–23–12; 8:45 am]

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DEPARTMENT OF COMMERCE

International Trade Administration

[A–201–840]

Notice of Final Determination of Sales at Less Than Fair Value: Galvanized Steel Wire From Mexico

AGENCY: Import Administration, International Trade Administration, Department of Commerce.

DATES: *Effective Date:* March 26, 2012.

SUMMARY: On November 4, 2011, the Department of Commerce (the Department) published its preliminary determination in the investigation of sales at less than fair value of galvanized steel wire (galvanized wire) from Mexico.[1]

The Department has determined that galvanized wire from Mexico is being, or is likely to be, sold in the United States at less than fair value, as provided in section 735 of the Tariff Act of 1930, as amended (the Act). The final margins of sales at less than fair value are listed below in the section entitled ''Final Determination of Investigation.''

FOR FURTHER INFORMATION CONTACT: Patrick Edwards or Ericka Ukrow, AD/CVD Operations, Office 7, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue NW., Washington, DC 20230; telephone: (202) 482–8029 or (202) 482–0405, respectively.

SUPPLEMENTARY INFORMATION:

Background

The preliminary determination in this investigation was published on November 4, 2011. *See Preliminary Determination.* We invited parties to comment on the *Preliminary Determination.* On November 8, 2011, we received timely-filed allegations from Deacero S.A. de C.V. (Deacero) that the Department made several ministerial errors in calculating its dumping margin for the preliminary determination.[2]

On November 10 and 23, 2011, the Department issued Deacero supplemental questionnaires.

On December 5, 2011, the Department released its memorandum addressing Deacero's ministerial error allegations, finding that no amendment to the preliminary determination was warranted. *See* Ministerial Error Memorandum.[3]

On December 5, 2011, Deacero submitted its response to the November 23, 2011, questionnaire.[4] Also on December 5, 2011, Petitioners[5] and respondent Aceros Camesa S.A. de C.V. (Camesa) timely filed a request for a public hearing.[6]

We conducted cost and sales verifications of the responses submitted by Deacero and Camesa (collectively, respondents).[7] All verification reports

[1] *See Galvanized Steel Wire from Mexico: Preliminary Determination of Sales at Less Than Fair Value and Postponement of Final Determination,* 76 FR 68422 (November 4, 2011) (*Preliminary Determination*).

[2] *See* Letter from Deacero, regarding ''Galvanized Steel Wire from Mexico,'' dated November 8, 2011. Petitioners did not comment on Deacero's ministerial error allegations.

[3] *See* Memorandum to Richard O. Weible, Director, Office 7, from Patrick Edwards and Ericka Ukrow, Case Analysts, through Angelica Mendoza, Program Manager, Office 7, entitled ''Ministerial Error Allegation in the Preliminary Determination of the Antidumping Duty Investigation of Galvanized Steel Wire from Mexico: Deacero S.A. de C.V.,'' dated December 5, 2011 (Ministerial Error Memorandum).

[4] *See* Deacero's Fourth Supplemental Questionnaire Response, dated December 8, 2011.

[5] The Petitioners in this investigation are Davis Wire Corporation, Johnston Wire Technologies, Inc., Mid-South Wire Company, Inc., National Standard, LLC, and Oklahoma Steel & Wire Company, Inc. (collectively, Petitioners).

[6] Deacero, also on December 5, 2011, requested to participate in a hearing in the event that another party requested a hearing.

[7] *See* Memorandum to the File from Christopher J. Zimpo and Frederick W. Mines, Case Accountants, through Theresa C. Deeley, Lead Accountant, and Neal M. Halper, Director, Office of Accounting, entitled ''Verification of the Cost of Production and Constructed Value Data Submitted by Deacero S.A. de C.V. in the Antidumping Duty Investigation of Galvanized Steel Wire from Mexico,'' dated January 13, 2012 (Deacero Cost Verification Report); Memorandum to the File from Frederick W. Mines and Christopher J. Zimpo, Case Accountants, through Theresa C. Deeley, Lead Accountant, and Neal M. Halper, Director, Office of Accounting, entitled ''Verification of the Cost Response of Aceros Camesa S.A. de C.V. in the Antidumping Duty Investigation of Galvanized Steel Wire from Mexico,'' dated January 13, 2012 (Camesa Cost Verification Report); Memorandum to the File from Christopher J. Zimpo and Frederick W. Mines, Case Accountants, through Theresa C. Deeley, Lead Accountant, and Neal M. Halper, Director, Office of Accounting, entitled ''Verification of the Further Manufacturing Data Submitted by Deacero S.A. de C.V. for Deacero USA Inc. and Stay-Tuff Fence Manufacturing, Inc. in the Antidumping Duty Investigation of Galvanized Steel Wire from Mexico,'' dated January 27, 2012 (Deacero Further-Manufacturing Verification Report); Memorandum to the File from Patrick Edwards, Case Analyst, through Angelica Mendoza, Program Manager, Office 7, entitled ''Verification of the Sales Responses of Aceros Camesa, S.A. de C.V. in the Antidumping Duty Investigation on Galvanized Steel Wire from Mexico,'' dated February 13, 2012 (Camesa Verification Report); Memorandum to the File from Ericka Ukrow and Patrick Edwards, Case Analysts, through Angelica L. Mendoza, Program Manager, Office 7, entitled ''Verification of the Sales Response of Deacero USA Inc. (Deacero USA) and Stay-Tuff Fence Manufacturing, Inc. (Stay-Tuff) in the Antidumping Duty Investigation of Galvanized Steel Wire from Mexico,'' dated February 15, 2012 (Deacero CEP Verification Report); Memorandum to the File from Patrick Edwards and Ericka Ukrow, Case Analysts, through Angelica Mendoza, Program Manager, Office 7, entitled ''Verification of the Sales Responses of Deacero S.A. de C.V. in the

Continued

are on file and available electronically via Import Administration's Antidumping and Countervailing Duty Centralized Electronic Service System (IA ACCESS). Access to IA ACCESS is available in the Central Records Unit (CRU), room 7046 of the main Department of Commerce building.

Based on the Department's findings at verification, as well as the minor corrections presented by Deacero and Camesa at the start of their respective verifications, we requested respondents to submit revised sales databases.[8] On February 27, 2012, as requested, Deacero and Camesa submitted their revised sales databases.

Subsequent to the release of the verification reports in this investigation, parties timely filed case and rebuttal briefs. We received a case brief from Petitioners, Deacero, and Camesa on February 23, 2012; Petitioners and Deacero filed rebuttal briefs on February 28, 2012. No public hearing was held because all requests for a hearing were withdrawn.

On March 2, 2012, at the Department's request, respondents in the companion galvanized wire investigations involving the People's Republic of China (both antidumping and countervailing duty) filed on the record of this investigation certain scope comments that were raised in those proceedings' case and rebuttal briefs. We allowed a period of time for parties in the instant proceeding to comment on those submissions, and we received no comments.

Analysis of Comments Received

All issues raised in the case and rebuttal briefs by parties to this antidumping investigation are addressed in the ''Issues and Decision Memorandum for the Final Determination of the Antidumping Duty Investigation of Galvanized Steel Wire from Mexico'' (Decision Memorandum) from Christian Marsh, Deputy Assistant Secretary for Antidumping and Countervailing Duty Operations, to Paul Piquado, Assistant Secretary for Import Administration, dated March 19, 2012, which is hereby adopted by this notice. A list of the issues which parties have raised and to which we have responded, all of which are in the Decision Memorandum, is attached to this notice as an appendix. Parties can find a complete discussion of all issues raised in this investigation and the corresponding recommendations in the Decision Memorandum which is on file and available electronically via IA ACCESS, which is accessible in the CRU, room 7046 of the main Department of Commerce building. In addition, a complete version of the Decision Memorandum can be accessed directly on the Web at *http://ia.ita.doc.gov/.* The paper copy and electronic version of the Decision Memorandum are identical in content.

Scope of Investigation

The scope of this investigation covers galvanized steel wire which is a cold-drawn carbon quality steel product in coils, of circular or approximately circular, solid cross section with any actual diameter of 0.5842 mm (0.0230 inch) or more, plated or coated with zinc (whether by hot-dipping or electroplating).

Steel products to be included in the scope of this investigation, regardless of Harmonized Tariff Schedule of the United States (HTSUS) definitions, are products in which: (1) Iron predominates, by weight, over each of the other contained elements; (2) the carbon content is two percent or less, by weight; and (3) none of the elements listed below exceeds the quantity, by weight, respectively indicated:

—1.80 percent of manganese, or
—1.50 percent of silicon, or
—1.00 percent of copper, or
—0.50 percent of aluminum, or
—1.25 percent of chromium, or
—0.30 percent of cobalt, or
—0.40 percent of lead, or
—1.25 percent of nickel, or
—0.30 percent of tungsten, or
—0.02 percent of boron, or
—0.10 percent of molybdenum, or
—0.10 percent of niobium, or
—0.41 percent of titanium, or
—0.15 percent of vanadium, or
—0.15 percent of zirconium.

Specifically excluded from the scope of this investigation is galvanized steel wire in coils of 15 feet or less which is pre-packed in individual retail packages. The products subject to this investigation are currently classified in subheadings 7217.20.30, 7217.20.45, and 7217.90.10 of the HTSUS which cover galvanized wire of all diameters and all carbon content. Galvanized wire is reported under statistical reporting numbers 7217.20.3000, 7217.20.4510, 7217.20.4520, 7217.20.4530, 7217.20.4540, 7217.20.4550, 7217.20.4560, 7217.20.4570, 7217.20.4580, and 7217.90.1000. These products may also enter under HTSUS subheadings 7229.20.0015, 7229.20.0090, 7229.90.5008, 7229.90.5016, 7229.90.5031, and 7229.90.5051. Although the HTSUS subheadings are provided for convenience and Customs purposes, the written description of the merchandise is dispositive.

Scope Comments

In their case and rebuttal briefs, Petitioners, respondents, and other interested parties provided comments on the scope and merchandise that is to be covered under the scope. We have discussed these comments fully in the Decision Memorandum. *See* Decision Memorandum at Comments 3 and 4. As a result of considering these comments, we have clarified the scope language to include not only circular cross section material, but also out-of-round material that meets the circular tolerances. *Id.* at Comment 3. We have also included an additional HTSUS subheading as part of the scope description. *Id.* at Comment 4. In addition, and as referenced in the ''Background'' section above, certain parties in the companion galvanized wire antidumping duty investigation involving the People's Republic of China provided scope comments. These comments have been addressed in the *Notice of Final Determination of Sales at Less than Fair Value: Galvanized Steel Wire from the People's Republic of China,* signed concurrently with this notice, and the accompanying Issues and Decision Memorandum at Comment 3.

In addition, in the *Preliminary Determination,* we responded to scope comments provided by Tree Island Wire (USA), Inc. and Preferred Wire Products, Inc., and we preliminarily determined that galvanized wire with a diameter less than one millimeter is subject to the scope of the investigation. No additional comments were made on this issue in the case or rebuttal briefs. For the final, we have made no changes on this determination from the *Preliminary Determination* and continue to find, specifically, that galvanized wire with a diameter less than one millimeter but equal to or greater than 0.5842 millimeters is covered by the scope. *See Preliminary Determination,* 76 FR at 68425.

Period of Investigation

The period of investigation (POI) is January 1, 2010, to December 31, 2010.

Antidumping Duty Investigation of Galvanized Steel Wire from Mexico,'' dated February 16, 2012 (Deacero Verification Report); and Memorandum to the File from Ericka Ukrow and Patrick Edwards, Case Analysts, through Angelica L. Mendoza, Program Manager, entitled ''Verification of Sales Response of Aceros Camesa S.A. de C.V. (Camesa) and WireCo World Group, Inc. (WireCo) in the Antidumping Duty Investigation of Galvanized Steel Wire from Mexico,'' dated February 16, 2012 (Camesa CEP Verification Report).

[8] *See* Letters from Angelica L. Mendoza, Program Manager, Office 7, to Deacero S.A. de C.V., dated February 21, 2012, and February 22, 2012; Letter from Angelica L. Mendoza, Program Manager, Office 7, to Aceros Camesa S.A. de C.V., dated February 21, 2012.

This period corresponds to the four most recent fiscal quarters prior to the month of the filing of the Petition. *See* 19 CFR 351.204(b)(1).

Verification

As provided in section 782(i) of the Act and noted above, we verified the information submitted by the respondents for use in our final determination. We used standard verification procedures, including examination of relevant accounting and production records, and original source documents provided by the respondents.

Changes Since the Preliminary Determination

Based on our analysis of the comments received and our findings at verification, we have made certain changes to the margin calculation for both Deacero and Camesa. For a discussion of these changes, *see* Decision Memorandum at Comments 1, 2, 7, 8, 9, and 11.[9] Additionally, subsequent to the *Preliminary Determination,* the Department revised its margin calculation program to ensure that it accurately reflected the methodological choices made in that determination. These revisions to the programming, had they been included in the preliminary determination, would not have altered the weighted average dumping margins calculated there. *See* Decision Memorandum at Comment 10; *see also,* Deacero Analysis Memo and Camesa Analysis Memo at Attachments I–VIII.

All Others Rate

Section 735(c)(5)(A) of the Act provides that the estimated ''all others'' rate shall be an amount equal to the weighted average of the estimated weighted average dumping margins established for exporters and producers individually investigated, excluding any zero or *de minimis* margins and any margins determined entirely under section 776 of the Act. Deacero and Camesa are the only respondents selected for individual examination in this investigation and, for each company, the Department has calculated a company-specific rate that is not zero or *de minimis.* Therefore, for purposes of determining the ''all others'' rate, and pursuant to section 735(c)(5)(A) of the Act, we are using the weighted average of the dumping margins calculated for Deacero and Camesa for the ''all others'' rate, as referenced in the ''Continuation of Suspension of Liquidation'' section below, *i.e.,* 22.43 percent, as indicated in the ''Final Determination of Investigation'' section below.[10]

Final Determination of Investigation

We determine that the following weighted-average dumping margins exist for the period January 1, 2010, through December 31, 2010:

Manufacturer or exporter	Weighted-Average margin (percent)
Deacero S.A. de C.V	20.89
Aceros Camesa S.A. de C.V	37.69
All-Others	22.43

Continuation of Suspension of Liquidation

Pursuant to section 735(c)(1)(B) of the Act and 19 CFR 351.211(b)(1), we will instruct U.S. Customs and Border Protection (CBP) to continue to suspend liquidation of all entries of subject merchandise from Mexico entered, or withdrawn from warehouse, for consumption on or after November 4, 2011, the date of the publication of the *Preliminary Determination,* for all producers/exporters. We will instruct CBP to require a cash deposit or the posting of a bond equal to the weighted-average margin, as indicated in the chart above, as follows: (1) The rate for the respondents will be the rates we have determined in this final determination; (2) if the exporter is not a firm identified in this investigation but the producer is, the rate will be the rate established for the producer of the subject merchandise; (3) the rate for all other producers or exporters will be 22.43 percent. These suspension-of-liquidation instructions will remain in effect until further notice.

International Trade Commission Notification

In accordance with section 735(d) of the Act, we have notified the International Trade Commission (ITC) of our final determination. As our final determination is affirmative and in accordance with section 735(b)(2) of the Act, the ITC will determine, within 45 days, whether the domestic industry in the United States is materially injured, or threatened with material injury, by reason of imports or sales (or the likelihood of sales) for importation of the subject merchandise. If the ITC determines that material injury or threat of material injury does not exist, the proceeding will be terminated and all securities posted will be refunded or canceled. If the ITC determines that such injury does exist, the Department will issue an antidumping duty order directing CBP to assess antidumping duties on all imports of the subject merchandise entered, or withdrawn from warehouse, for consumption on or after the effective date of the suspension of liquidation.

Notification Regarding APO

This notice also serves as a reminder to parties subject to administrative protective order (APO) of their responsibility concerning the disposition of proprietary information disclosed under APO in accordance with 19 CFR 351.305. Timely notification of return/destruction of APO materials or conversion to judicial protective order is hereby requested. Failure to comply with the regulations and the terms of an APO is a sanctionable violation.

This determination is issued and published pursuant to sections 735(d) and 777(i)(1) of the Act.

Dated: March 19, 2012.

Paul Piquado,

Assistant Secretary for Import Administration.

Appendix

Deacero S.A. de C.V. (Deacero)
- Comment 1: Conversion of U.S. Packing Expenses from Mexican Pesos to U.S. Dollars
- Comment 2: Correction of Ministerial Errors

[9] *See also* Memorandum from Ericka Ukrow to The File, entitled ''Galvanized Steel Wire from Mexico—Final Determination of Sales at Less Than Fair Value Analysis Memorandum for Deacero S.A. de C.V.,'' dated March 19, 2012 (Deacero Analysis Memo), and Memorandum from Patrick Edwards to The File, entitled ''Galvanized Steel Wire from Mexico—Final Determination of Sales at Less Than Fair Value Analysis Memorandum for Aceros Camesa S.A. de C.V.,'' dated March 19, 2012 (Camesa Analysis Memo); Memorandum from Christopher J. Zimpo to Neal M. Halper, entitled ''Cost of Production, Constructed Value, and Further Manufacturing Cost Calculation Adjustments for the Final Determination: Deacero S.A. de C.V.,'' dated March 19, 2012 (Deacero Cost Memo).

[10] When there are only two relevant weighted-average dumping margins available to determine the ''all-others'' rate, the Department may use a simple average so as to avoid disclosure of business proprietary information. *See Seamless Refined Copper Pipe and Tube From Mexico: Final Determination of Sales at Less Than Fair Value,* 75 FR 60723, 60724 (October 1, 2010). However, in this final determination, the Department has determined an ''all-others'' rate using Deacero's and Camesa's ranged, public U.S. sales quantities, which also avoids disclosure of business proprietary information. *See Ball Bearings and Parts Thereof From France, Germany, Italy, Japan, and the United Kingdom: Final Results of Antidumping Duty Administrative Reviews, Final Results of Changed-Circumstances Review, and Revocation of an Order in Part,* 75 FR 53661 (September 1, 2010), and accompanying Issues and Decision Memorandum at Comment 1.

Comment 3: Whether Oval Galvanized Steel Wire is Outside the Scope of the Investigation
Comment 4: Whether PVC-Coated Galvanized Steel Wire is Outside the Scope of the Investigation
Comment 5: Whether To Apply Adverse Facts Available to Deacero's Inland Freight Expenses for Certain Home Market Sales
Comment 6: Whether To Apply Adverse Facts Available to Deacero's U.S. Repacking Expenses
Comment 7: Deacero's Reporting of Costs for Further Manufacturing
Comment 8: Deacero's Reporting of Inland Freight Charges for Certain U.S. Sales
Comment 9: Deacero's Reporting of Cost of Production and Constructed Value
Aceros Camesa S.A. de C.V. (Camesa)
Comment 10: Whether the Department Used an Average-to-Average Comparison Methodology
Comment 11: Whether the U.S. Inventory Carrying Costs Were Calculated Properly

[FR Doc. 2012–7213 Filed 3–23–12; 8:45 am]

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DEPARTMENT OF COMMERCE

International Trade Administration

[A–570–975]

Galvanized Steel Wire From the People's Republic of China: Final Determination of Sales at Less Than Fair Value

AGENCY: Import Administration, International Trade Administration, Department of Commerce.

DATES: *Effective Date:* March 26, 2012.

SUMMARY: On November 4, 2011, the Department of Commerce (the ''Department'') published the *Preliminary Determination* of sales at less than fair value (''LTFV'') in the antidumping investigation of galvanized steel wire from the People's Republic of China (''PRC'').[1] On November 29, 2011, the Department published an *Amended Preliminary Determination*.[2] The period of investigation (''POI'') is July 1, 2010, through December 31, 2010. Based on our analysis of the comments received, we have made changes to our *Preliminary Determination* and *Amended Preliminary Determination.* The Department continues to find that galvanized steel wire from the PRC is being, or is likely to be, sold in the United States at LTFV, as provided in section 735 of the Tariff Act of 1930, as amended (''the Act''). The estimated margins of sales at LTFV are shown in the ''Final Determination Margins'' section of this notice.

FOR FURTHER INFORMATION CONTACT: Irene Gorelik, Katie Marksberry or Kabir Archuletta, AD/CVD Operations, Office 9, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue NW., Washington, DC, 20230; telephone: (202) 482–6905, (202) 482–7906, or 482–2593, respectively.

SUPPLEMENTARY INFORMATION:

Background

On November 4, 2011, Shanghai Bao Zhang Industry Co., Ltd., Anhui Bao Zhang Metal Products Co., Ltd., and B&Z Galvanized Wire Industry (collectively, ''Baozhang''), one of the three respondents selected for individual examination in this investigation, notified the Department that it would not participate in any the scheduled verifications.[3] On November 9, 2011, Tianjin Honbase Machinery Manufactory Co., Ltd. (''Honbase''), another respondent selected for individual examination in this investigation, also notified the Department that it would not participate in any scheduled verifications.[4]

On November 2, 2011, Qingdao Ant Hardware Manufacturing Co., Ltd. (''AHM''), one of the non-individually examined exporters that received a separate rate, placed on the record samples of products which it believes should be excluded from the scope of the investigation. On November 9, 2011, the Department notified all interested parties that it would allow any interested parties to physically view the samples.[5]

Between December 9 and 14, 2011, we received case and rebuttal briefs from Petitioners,[6] AHM, Tianjin Huayuan Metal Wire Products Co., Ltd. (''Huayuan''),[7] and Baozhang. The Department did not hold a public hearing, pursuant to 19 CFR 351.310(d), as the hearing requests made by interested parties were withdrawn.[8]

On March 2, 2012, at the Department's request, interested parties in the companion galvanized wire investigations involving Mexico filed on the record of this investigation certain scope comments that were raised in that proceeding's case and rebuttal briefs. We allowed a period of time for parties in the instant proceeding to comment on those submissions. We received no comments.

Analysis of Comments Received

All issues raised in the case and rebuttal briefs by parties to this investigation are addressed in the ''Antidumping Duty Investigation of Galvanized Steel Wire from the People's Republic of China: Issues and Decision Memorandum for the Final Determination'' (''Decision Memo''), dated concurrently with this notice and which is hereby adopted by this notice. A list of the issues which parties raised, and to which we respond in the Decision Memo, are attached to this notice as Appendix I. The Decision Memo is a public document and is on file electronically via Import Administration's Antidumping and Countervailing Duty Centralized Electronic Service System (''IA ACCESS''). Access to IA ACCESS is available in the Central Records Unit (''CRU''), room 7046 of the main Department of Commerce building. In addition, a complete version of the Decision Memo can be accessed directly on the internet at *http://www.trade.gov/ia/*. The signed Decision Memo and the electronic versions of the Decision Memo are identical in content.

Changes Since the Preliminary Determination

Based on our analysis of information on the record of this investigation, we have made changes regarding Honbase and Baozhang for the final determination. Specifically, for the final determination, we have applied total adverse facts available (''AFA'') for Honbase's and Baozhang's failure to participate and their subsequent inclusion as part of the PRC-wide entity.

[1] *See Galvanized Steel Wire From the People's Republic of China: Preliminary Determination of Sales at Less Than Fair Value and Postponement of Final Determination,* 76 FR 68407 (November 4, 2011) (''*Preliminary Determination*'').

[2] *See Galvanized Steel Wire From the People's Republic of China: Amended Preliminary Determination of Sales at Less Than Fair Value,* 76 FR 73589 (November 29, 2011) (''*Amended Preliminary Determination*'').

[3] *See* Letter to the Department from Baozhang; Re: Letter Electing Not To Participate in Verification, dated November 4, 2011.

[4] *See* Letter to the Department from Honbase; Re: Galvanized Steel Wire from the People's Republic of China, dated November 9, 2011.

[5] *See* ''Memorandum to the File from Kabir Archuletta, re: Galvanized Steel Wire Sample Viewing,'' dated November 9, 2011.

[6] Davis Wire Corporation, Johnstown Wire Technologies, Inc., Mid-South Wire Company, Inc., National Standard, LLC and Oklahoma Steel & Wire Company, Inc. (hereinafter collectively referred to as ''Petitioners'').

[7] In this case, Huayuan refers to the collective group of affiliated companies comprised of Tianjin Huayuan Metal Wire Products Co., Ltd., Tianjin Tianxin Metal Products, Co., Ltd., Tianjin Huayuan Times Metal Products Co., Ltd., and Tianjin Meijiahua Trade Co., Ltd.

[8] *See* Letter to the Department from Huayuan; Re: Galvanized Steel Wire from the People's Republic of China: Withdrawal of Request for a Hearing, dated December 15, 2011.

Scope of Investigation

The scope of this investigation covers galvanized steel wire which is a cold-drawn carbon quality steel product in coils, of circular or approximately circular, solid cross section with any actual diameter of 0.5842 mm (0.0230 inch) or more, plated or coated with zinc (whether by hot-dipping or electroplating).

Steel products to be included in the scope of this investigation, regardless of Harmonized Tariff Schedule of the United States (''HTSUS'') definitions, are products in which: (1) Iron predominates, by weight, over each of the other contained elements; (2) the carbon content is two percent or less, by weight; and (3) none of the elements listed below exceeds the quantity, by weight, respectively indicated:

—1.80 percent of manganese, or
—1.50 percent of silicon, or
—1.00 percent of copper, or
—0.50 percent of aluminum, or
—1.25 percent of chromium, or
—0.30 percent of cobalt, or
—0.40 percent of lead, or
—1.25 percent of nickel, or
—0.30 percent of tungsten, or
—0.02 percent of boron, or
—0.10 percent of molybdenum, or
—0.10 percent of niobium, or
—0.41 percent of titanium, or
—0.15 percent of vanadium, or
—0.15 percent of zirconium.

Specifically excluded from the scope of this investigation is galvanized steel wire in coils of 15 feet or less which is pre-packed in individual retail packages. The products subject to this investigation are currently classified in subheadings 7217.20.30, 7217.20.45, and7217.90.1000 of the HTSUS which cover galvanized wire of all diameters and all carbon content. Galvanized wire is reported under statistical reporting numbers 7217.20.3000, 7217.20.4510, 7217.20.4520, 7217.20.4530, 7217.20.4540, 7217.20.4550, 7217.20.4560, 7217.20.4570, 7217.20.4580, and 7217.90.1000. These products may also enter under HTSUS subheadings 7229.20.0015, 7229.20.0090, 7229.90.5008, 7229.90.5016, 7229.90.5031, and 7229.90.5051. Although the HTSUS subheadings are provided for convenience and Customs purposes, the written description of the merchandise is dispositive.

Scope Comments

In their case and rebuttal briefs, interested parties provided comments on the scope and merchandise that is to be covered under the scope. We have discussed these comments fully in the Decision Memo.[9] In addition, and as referenced in the ''Background'' section above, certain parties in the companion galvanized wire investigation involving Mexico provided scope comments.[10] As a result of considering these comments, we have made a slight modification of the scope to clarify that galvanized steel wire of circular or approximately circular, solid cross section is included within the scope.[11] We have also included an additional HTSUS subheading as part of the scope description.[12]

In addition, in the *Preliminary Determination,* we responded to scope comments provided by Tree Island Wire (USA), Inc. and Preferred Wire Products, Inc., and we preliminarily determined that galvanized wire with a diameter less than one millimeter is subject to the scope of the investigation. No additional comments were made on this issue in the case or rebuttal briefs. Thus, for the final determination, we have made no changes on this determination from the *Preliminary Determination* and continue to find, specifically, that galvanized wire with a diameter less than one millimeter but equal to or greater than 0.5842 millimeters is covered by the scope.

Separate Rates

In proceedings involving non-market-economy (''NME'') countries, the Department begins with a rebuttable presumption that all companies within the country are subject to government control and, thus, should be assigned a single antidumping duty deposit rate. It is the Department's policy to assign all exporters of merchandise subject to an investigation in an NME country this single rate unless an exporter can demonstrate that it is sufficiently independent so as to be entitled to a separate rate.[13] In the *Preliminary Determination,* we found that Shijiazhuang Kingway Metal Products Co., Ltd.; Shanxi Yuci Broad Wire Products Co., Ltd.; Huanghua Jinhai Hardware Products Co., Ltd.; Huanghua Jinhai Import & Export Trading Co., Ltd.; Guizhou Wire Rope Incorporated Company; Hebei Minmetals Co., Ltd.; Shandong Minmetals Co., Ltd.; Fasten Group Imp. & Exp. Co., Ltd.; Qingdao Ant Hardware Manufacturing Co., Ltd.; Suntec Industries Co., Ltd.; M & M Industries Co., Ltd.; Shaanxi New Mile International Trade Co., Ltd.; Hebei Cangzhou New Century Foreign Trade Co., Ltd.; Dezhou Hualude Hardware Products Co., Ltd.; Shanghai SETI Enterprise International Co., Ltd.; and Xi'an Metals and Minerals Import and Export Co., Ltd., demonstrated their eligibility for, and were hence assigned, separate rate status.

No parties commented on the above companies' eligibility for separate rate status. Consequently, for the final determination, we continue to find that these companies demonstrated both a *de jure* and *de facto* absence of government control with respect to their exports of the merchandise under investigation, and are eligible for separate rate status for the final determination.

The Department received comments from Huayuan and Petitioners regarding the Department's preliminary determination with respect to Huayuan's separate rate status. The Department has addressed the arguments in Comment 1 of the Decision Memo. For the final determination, we continue to find that Huayuan has not overcome the presumption of government control with respect to its exports of the merchandise under investigation.[14] Thus, we continue to find that Huayuan is not eligible for a separate rate and remains part of the PRC-wide entity.

Additionally, as discussed in the ''PRC-wide Entity and Facts Available'' section below and in Comment 2 of the Decision Memo, Honbase and Baozhang failed to demonstrate their eligibility for a separate rate by preventing the Department from verifying the accuracy of their information and will, therefore, be considered part of the PRC-wide entity for this final determination.

Calculation of Separate Rate

In the *Preliminary Determination,* we calculated a weighted-average separate rate based on the margins calculated for Honbase and Baozhang and their submitted publicly ranged sales quantities. However, none of the mandatory respondents are receiving a

[9] *See* Decision Memo at Comment 3.

[10] These comments have been addressed in the *Notice of Final Determination of Sales at Less Than Fair Value: Galvanized Steel Wire from Mexico,* signed concurrently with this notice and accompanying Issues and Decision Memorandum at Comments 3 and 4.

[11] *See id.,* at Comment 3.

[12] *See id.,* at Comment 4.

[13] *See Final Determination of Sales at Less Than Fair Value: Sparklers from the People's Republic of China,* 56 FR 20588 (May 6, 1991) (''*Sparklers*''), as amplified by *Notice of Final Determination of Sales at Less Than Fair Value: Silicon Carbide from the People's Republic of China,* 59 FR 22585 (May 2, 1994) (''*Silicon Carbide*''), and 19 CFR 351.107(d).

[14] *See* Decision Memo at Comment 1; *see also* ''Memorandum to the File from Irene Gorelik, Senior Case Analyst: Program Analysis for the Preliminary Determination of Antidumping Duty Investigation of Galvanized Steel Wire from the People's Republic of China: Tianjin Huayuan Metal Wire Products Co., Ltd.,'' dated October 27, 2011 (''Huayuan Prelim Analysis Memo'') at Exhibit 1.

separate rate for this final determination. If the estimated weighted-average margins for all individually investigated respondents are *de minimis* or based entirely on facts available (''FA''), the Department may use any reasonable method to determine the separate rate margin.[15] Therefore, pursuant to section 735(c)(5)(A) and (B) of the Act, we have, for the final determination, determined the separate rate margin using a reasonable method that is consistent with our established practice. Specifically, we have assigned to the separate rate companies the simple average of all of the margins alleged in the Petition,[16] as revised in the *Initiation Notice,*[17] which is 194.00 percent.[18]

The PRC-Wide Entity and Facts Available

In the *Preliminary Determination,* the Department found that:

> information on the record of this investigation indicates that there were more exporters of galvanized steel wire from the PRC than those indicated in the response to our request for Q&V information during the POI * * * Although all producers/exporters were given an opportunity to provide Q&V information, not all producers/exporters provided a response to the Department's Q&V letter.[19]

Furthermore, the Department did not grant a separate rate to Tianjin Jinghai Yicheng Metal Products Co., Ltd. (''Tianjin Jinghai'') because it withdrew its participation from this investigation as a selected mandatory respondent, having never provided any evidence demonstrating an absence of government control both in law and in fact. As such, the Department preliminarily determined that there were PRC producers/exporters of galvanized steel wire during the POI that did not respond to the Department's request for information. We treated these PRC producers/exporters as part of the PRC-wide entity because they did not qualify for a separate rate.[20]

Further, as stated above, in the *Preliminary Determination,* the Department did not grant a separate rate to Huayuan because it did not overcome the presumption of government control.[21] The Department has addressed this issue at length in the Decision Memo, based on comments received from Huayuan and Petitioners.[22] However, because the Department begins with the presumption that all companies within an NME country are subject to government control, and because only the separate rate recipients have overcome that presumption, because Huayuan did not qualify for a separate rate, the Department is applying the PRC-wide entity rate to Huayuan and its affiliates. Despite Huayuan's submission of sales and factor of production data, because Huayuan did not receive a separate rate and was found to be part of the PRC-wide entity, we have not used this data to calculate a separate antidumping duty margin for Huayuan. Rather, we have assigned to Huayuan the rate assigned to the PRC-wide entity. This is consistent with our long-standing practice of assigning a country-wide rate to NME companies that do not qualify for a separate rate, and has been affirmed by the court.[23]

Section 776(a)(2) of the Act provides that if an interested party: (A) Withholds information that has been requested by the Department; (B) fails to provide such information in a timely manner or in the form or manner requested, subject to subsections 782(c)(1) and (e) of the Act; (C) significantly impedes a determination under the antidumping statute; or (D) provides such information but the information cannot be verified, the Department shall, subject to subsection 782(d) of the Act, use facts otherwise available in reaching the applicable determination.

Section 782(c)(1) of the Act provides that if an interested party ''promptly after receiving a request from {the Department} for information, notifies {the Department} that such party is unable to submit the information in the requested form and manner, together with a full explanation and suggested alternative form in which such party is able to submit the information,'' the Department may modify the requirements to avoid imposing an unreasonable burden on that party.

Section 782(d) of the Act provides that, if the Department determines that a response to a request for information does not comply with the request, the Department will inform the person submitting the response of the nature of the deficiency and shall, to the extent practicable, provide that person the opportunity to remedy or explain the deficiency. If that person submits further information that continues to be unsatisfactory, or this information is not submitted within the applicable time limits, the Department may, subject to section 782(e) of the Act, disregard all or part of the original and subsequent responses, as appropriate.

Section 782(e) of the Act states that the Department shall not decline to consider information deemed ''deficient'' under section 782(d) if: (1) The information is submitted by the established deadline; (2) the information can be verified; (3) the information is not so incomplete that it cannot serve as a reliable basis for reaching the applicable determination; (4) the interested party has demonstrated that it acted to the best of its ability; and (5) the information can be used without undue difficulties.

Furthermore, section 776(b) of the Act states that if the administering authority finds that an interested party has not acted to the best of its ability to comply with a request for information, the administering authority may, in reaching its determination, use an inference that is adverse to that party. The adverse inference may be based upon: (1) The Petition, (2) a final determination in the investigation under this title, (3) any previous review under section 751 or determination under section 753, or (4) any other information placed on the record.

Information on the record of this investigation indicates that the PRC-

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[15] *See* section 735(c)(5)(B) of the Act.

[16] *See* Petitions for the Imposition of Antidumping Duties on Galvanized Steel Wire from Mexico and Antidumping and Countervailing Duties on Galvanized Steel Wire from the People's Republic of China filed on March 31, 2011 (the ''Petition'').

[17] *See Galvanized Steel Wire from the People's Republic of China and Mexico: Initiation of Antidumping Duty Investigations,* 76 FR 23548, 23552 (April 27, 2011) (''*Initiation Notice*''); *see also* Decision Memo at Comment 7.

[18] *See, e.g., Aluminum Extrusions from the People's Republic of China: Final Determination of Sales at Less Than Fair Value,* 76 FR 18524, 18525 (April 4, 2011) (''For the final determination, we have assigned the 29 separate rate applicants to whom we are granting a separate rate a dumping margin of 32.79 percent, based on the simple average of the margins alleged in the petition * * *''); *Notice of Final Determination of Sales at Less Than Fair Value and Affirmative Final Determination of Critical Circumstances: Circular Welded Carbon Quality Steel Pipe from the People's Republic of China,* 73 FR 31970, 31971–31972 (June 5, 2008) (''* * * we have assigned to the separate rate companies the simple average of the margins alleged in the petition.''); *Final Determination of Sales at Less Than Fair Value: Sodium Hexametaphosphate from the People's Republic of China,* 73 FR 6479, 6480–6481 (February 4, 2008) (''Specifically, we have assigned an average of the margins calculated for purposes of initiation as the separate rate for the final determination.'').

[19] *See Preliminary Determination,* 76 FR at 68415–68416.

[20] *See id.*

[21] *See id.,* 76 FR at 68413; *see also* ''Memorandum to Catherine Bertrand, Program Manager, Office 9, from Irene Gorelik, Senior International Trade Analyst, Office 9: Antidumping Duty Investigation of Galvanized Steel Wire from the People's Republic of China: Preliminary Affiliation and Single Entity Determinations for Tianjin Huayuan Metal Wire Products Co., Ltd.,'' dated October 27, 2011 (''Huayuan Affiliation Memo''); and Huayuan Prelim Analysis Memo.

[22] *See* Decision Memo at Comment 1A, 1B, and 1C.

[23] *See Transcom, Inc.* v. *United States,* 182 F.3d 876, 883 (CAFC 1999) (citing *Sigma Corp* v. *United States,* 117 F.3d 1401, 1405- 06. (CAFC 1997)).

wide entity was unresponsive to the Department's requests for information. Certain companies: (1) Did not respond to our questionnaires requesting quantity and value (''Q&V'') information; or (2) withdrew participation from the investigation. As a result, pursuant to section 776(a)(2)(A) of the Act, we found that the use of facts available is appropriate to determine the PRC-wide rate.

Since the *Preliminary Determination,* Honbase and Baozhang, the two mandatory respondents for which we calculated preliminary antidumping duty margins, both withdrew their participation from their respective, scheduled on-site verifications. By ceasing to participate in the verification of their questionnaire responses, Honbase and Baozhang prevented the Department from verifying the accuracy of their information as provided by section 782(i) of the Act, and thus, failed to demonstrate their eligibility for a separate rate.[24] Therefore, for the final determination, the Department finds that Honbase and Baozhang are considered to be part of the PRC-wide entity (along with Tianjin Jinghai, the companies unresponsive to the Q&V questionnaires and Huayuan). Because the PRC-wide entity, which now also includes Honbase and Baozhang, significantly impeded the Department's proceeding pursuant to sections 776(a)(2)(C) of the Act, by failing to provide the requested information and by refusing to allow verification of their data, we find that the PRC-wide entity withheld information requested by the Department pursuant to section 776(a)(2)(A) of the Act. Based on the foregoing, we have determined that the PRC-wide entity failed to act to the best of its ability by not providing the requested information and by ceasing their participation in the proceeding. Therefore, we continue to find that when selecting from among the FA, an adverse inference is warranted for the PRC-wide entity, including Honbase and Baozhang, pursuant to section 776(b) of the Act.

The PRC-Wide Entity Rate

Because we begin with the presumption that all companies within a NME country are subject to government control, and because only the companies listed under the ''Final Determination Margins'' section, below, have overcome that presumption, we are applying a single antidumping rate (*i.e.,* the PRC-wide rate) to all other exporters of the merchandise under consideration. These other companies did not demonstrate entitlement to a separate rate.[25] The PRC-wide rate applies to all entries of the merchandise under consideration except for entries from the companies receiving a separate rate.[26]

In the *Preliminary Determination,* the Department determined that there were: (1) Exporters/producers of the merchandise subject to the investigation during the POI from the PRC that did not respond to the Department's request for information; (2) exporters that withdrew from participation from the review; and (3) exporters that did not overcome the presumption of government control (specifically Huayuan [27]). Further, we treated these PRC producers/exporters as part of the PRC-wide entity because they did not qualify for a separate rate. Finally, we found that the use of FA was appropriate to determine the PRC-wide rate pursuant to section 776(a)(2)(A) of the Act.[28]

In the *Preliminary Determination,* the Department also determined that, in selecting from among the FA, an adverse inference is appropriate because the PRC-wide entity failed to cooperate by not acting to the best of its ability to comply with requests for information.[29] As AFA, we preliminarily assigned to the PRC-wide entity a rate of 235.00 percent, the highest calculated rate from the Petition.[30]

Section 776(a)(2) of the Act provides that, if an interested party (A) withholds information requested by the Department, (B) fails to provide such information by the deadline, or in the form or manner requested, (C) significantly impedes a proceeding, or (D) provides information that cannot be verified, the Department shall use, subject to sections 782(d) and (e) of the Act, facts otherwise available in reaching the applicable determination. Because the PRC-wide entity (now including Honbase and Baozhang) did not respond to our requests for information, withheld information requested by the Department, and did not allow their information to be verified, pursuant to sections 776(a)(2)(A), (C), and (D) of the Act, we determine, as in the *Preliminary Determination,* that the use of facts otherwise available is appropriate to determine the PRC-wide rate. The PRC-wide entity has not provided the Department with the requested information; therefore, pursuant to section 776(a)(2)(A) of the Act, the Department continues to find that the use of FA is appropriate to determine the PRC-wide rate. As noted above, section 776(b) of the Act provides that, in selecting from among the facts otherwise available, the Department may employ an adverse inference if an interested party fails to cooperate by not acting to the best of its ability to comply with requests for information.[31] We find that, because the PRC-wide entity did not respond to our request for information, it has failed to cooperate to the best of its ability. Therefore, the Department finds that, in selecting from among the facts otherwise available, an adverse inference is appropriate for the PRC-wide entity.

Corroboration

Section 776(c) of the Act provides that, when the Department relies on secondary information, rather than on information obtained in the course of an investigation as facts available, it must, to the extent practicable, corroborate that information from independent sources reasonably at its disposal. Secondary information is described in the SAA as ''information derived from the petition that gave rise to the investigation or review, the final determination concerning subject merchandise, or any previous review under Section 751 concerning the subject merchandise.'' [32] The SAA provides that to ''corroborate'' means simply that the Department will satisfy itself that the secondary information to be used has probative value.[33] The SAA also states that independent sources used to corroborate may include, for example, published price lists, official import statistics and customs data, and

[24] *See* section 776(a)(2)(D) of the Act.

[25] *See, e.g., Synthetic Indigo From the People's Republic of China; Notice of Final Determination of Sales at Less Than Fair Value,* 65 FR 25706, 25707 (May 3, 2000).

[26] These companies are: Shijiazhuang Kingway Metal Products Co., Ltd.; Shanxi Yuci Broad Wire Products Co., Ltd.; Huanghua Jinhai Hardware Products Co., Ltd.; Huanghua Jinhai Import & Export Trading Co., Ltd.; Guizhou Wire Rope Incorporated Company; Hebei Minmetals Co., Ltd.; Shandong Minmetals Co., Ltd.; Fasten Group Imp. & Exp. Co., Ltd.; Qingdao Ant Hardware Manufacturing Co., Ltd.; Suntec Industries Co., Ltd.; M & M Industries Co., Ltd.; Shaanxi New Mile International Trade Co., Ltd.; Hebei Cangzhou New Century Foreign Trade Co., Ltd.; Dezhou Hualude Hardware Products Co., Ltd.; Shanghai SETI Enterprise International Co., Ltd.; and Xi'an Metals and Minerals Import and Export Co., Ltd.

[27] *See* Decision Memo at Comments 1A, 1B, and 1C; *see also Preliminary Determination,* 76 FR at 68413.

[28] *See Preliminary Determination,* 76 FR at 68416.

[29] *See id.*

[30] *See id.; see also* Statement of Administrative Action accompanying the URAA, H.R. Rep. No. 103–316, vol. 1, at 870 (1994) (''SAA'').

[31] *See Notice of Final Determination of Sales at Less Than Fair Value: Certain Cold-Rolled Flat-Rolled Carbon-Quality Steel Products from the Russian Federation,* 65 FR 5510, 5518 (February 4, 2000). *See also* SAA at 870.

[32] *See* SAA at 870.

[33] *See id.*

information obtained from interested parties during the particular investigation.[34] To corroborate secondary information, the Department will, to the extent practicable, examine the reliability and relevance of the information used.[35]

At the *Preliminary Determination,* as AFA the Department selected a rate of 235.00 percent, the highest rate from the Petition,[36] as recalculated by the Department in the *Initiation Notice.*[37] Petitioners' methodology for calculating the export price and normal value (''NV'') in the Petition is discussed in the *Initiation Notice.*[38] To corroborate the AFA margin that we selected, we compared this margin to the model-specific margins we found for the cooperating mandatory respondents. We found that the margin of 235.00 percent had probative value because it is within the range of the non-aberrational, model-specific margins that we preliminarily calculated for one of the mandatory respondents during the POI.[39] Accordingly, we found that 235.00 percent was a reliable and relevant rate, considering the record information, and thus, had probative value for the *Preliminary Determination.*

For the final determination, because there were no margins calculated for the mandatory respondents, to corroborate the 235.00 percent margin used as AFA for the PRC-wide entity, to the extent appropriate information was available, we are affirming our pre-initiation analysis of the adequacy and accuracy of the information in the Petition.[40] During our pre-initiation analysis, we examined evidence supporting the calculations in the Petition and the supplemental information provided by Petitioners prior to initiation to determine the probative value of the margins alleged in the Petition. During our pre-initiation analysis, we examined the information used as the basis of export price and NV in the Petition, and the calculations used to derive the alleged margins. Also during our pre-initiation analysis, we examined information from various independent sources provided either in the Petition or, based on our requests, in supplements to the Petition, which corroborated key elements of the export price and NV calculations.[41] Therefore, for the final determination, we have corroborated our AFA margin by affirming our pre-initiation analysis. Because no parties commented on the selection of the PRC-wide rate, we continue to find that the margin of 235.00 percent has probative value. Accordingly, we find that the rate of 235.00 percent is corroborated within the meaning of section 776(c) of the Act.

Surrogate Country

In the *Preliminary Determination,* we stated that we selected Thailand as the appropriate surrogate country to use in this investigation for the following reasons: (1) It is a significant producer of comparable merchandise; (2) it is at a similar level of economic development pursuant to 773(c)(4) of the Act; and (3) we have reliable data from Thailand that we can use to value the factors of production.[42] For the final determination, we are not calculating any margins that require surrogate values from a surrogate country and, therefore, there is no need to consider comments with respect to the selection of a surrogate country.[43]

Final Determination Margins

We determine that the below percentage margins exist for the following entities for the POI:

Exporter	Producer	Weighted-average margin (percent)
Shijiazhuang Kingway Metal Products Co., Ltd	Shijiazhuang Kingway Metal Products Co., Ltd	194.00
Shanxi Yuci Broad Wire Products Co., Ltd	Shanxi Yuci Broad Wire Products Co., Ltd	194.00
Huanghua Jinhai Hardware Products Co., Ltd	Huanghua Jinhai Hardware Products Co., Ltd	194.00
Huanghua Jinhai Import & Export Trading Co., Ltd	Huanghua Jinhai Hardware Products Co., Ltd	194.00
Guizhou Wire Rope Incorporated Company	Guizhou Wire Rope Incorporated Company	194.00
Hebei Minmetals Co., Ltd	Huanghua Jinhai Hardware Products Co., Ltd	194.00
Hebei Minmetals Co., Ltd	Huanghua Huarong Hardware Co., Ltd	194.00
Hebei Minmetals Co., Ltd	Shandong Jining Lianzhong Hardware Products Co., Ltd	194.00
Shandong Minmetals Co., Ltd	Huanghua Jinhai Hardware Products Co., Ltd	194.00
Shandong Minmetals Co., Ltd	Huanghua Xincheng Metal Products Co., Ltd	194.00
Shandong Minmetals Co., Ltd	Tianjin Shi Dagangqu Yuliang XianCaichang	194.00
Shandong Minmetals Co., Ltd	Tianjin Hengfeng Metal Wire Co., Ltd	194.00
Shandong Minmetals Co., Ltd	Tianjin Shi Jinghai Yicheng Hardware Products Co., Ltd	194.00
Fasten Group Imp. & Exp. Co., Ltd	Jiangsu Fasten Stock Co., Ltd	194.00
Fasten Group Imp. & Exp. Co., Ltd	Zhangjiagang Guanghua Communication Cable Materials Co., Ltd.	194.00
Fasten Group Imp. & Exp. Co., Ltd	Zhangjiagang Kaihua Metal Products Co., Ltd	194.00
Qingdao Ant Hardware Manufacturing Co., Ltd	Qingdao Ant Hardware Manufacturing Co., Ltd	194.00
Suntec Industries Co., Ltd	Tianjin Jinnan 4th Wire Factory	194.00
Suntec Industries Co., Ltd	Tianjin Yinshan Manufacture & Trade Co., Ltd	194.00
Suntec Industries Co., Ltd	Tianjin Zhaohong Metal Products Co., Ltd	194.00
Suntec Industries Co., Ltd	Tianjin Wandai Metal Products Co., Ltd	194.00
Suntec Industries Co., Ltd	Tianjin Dagang Wire Factory	194.00
Suntec Industries Co., Ltd	Tianjin Jinghai Yicheng Metal Products Co., Ltd	194.00

[34] *See id.*

[35] *See Tapered Roller Bearings and Parts Thereof, Finished and Unfinished, From Japan, and Tapered Roller Bearings, Four Inches or Less in Outside Diameter, and Components Thereof, From Japan; Preliminary Results of Antidumping Duty Administrative Reviews and Partial Termination of Administrative Reviews,* 61 FR 57391, 57392 (November 6, 1996), unchanged in *Tapered Roller Bearings and Parts Thereof, Finished and Unfinished, From Japan, and Tapered Roller Bearings, Four Inches or Less in Outside Diameter, and Components Thereof, From Japan; Final Results of Antidumping Duty Administrative Reviews and Termination in Part,* 62 FR 11825 (March 13, 1997).

[36] *See* Petition.

[37] *See Initiation Notice.*

[38] *See id.*

[39] *See* ''Memorandum to the File, from Irene Gorelik, Senior Analyst, re; Corroboration of the PRC-Wide Entity Rate for the Preliminary Determination in the Antidumping Duty Investigation of Galvanized Steel Wire from the People's Republic of China,'' dated October 27, 2011.

[40] *See* Antidumping Investigation Initiation Checklist: Galvanized Steel Wire from the People's Republic of China, dated April 20, 2011 (''Initiation Checklist'').

[41] *See id.*

[42] *See Preliminary Determination,* 76 FR at 68410–68412.

[43] *See* Decision Memo at Comment 4.

Exporter	Producer	Weighted-average margin (percent)
Suntec Industries Co., Ltd	Tianjin Liquan Metal Products Co., Ltd	194.00
Suntec Industries Co., Ltd	Tianjin Huayuan Times Metal Products Co., Ltd	194.00
Suntec Industries Co., Ltd	Tianjin Fusheng Metal Products Co., Ltd	194.00
M & M Industries Co., Ltd	Tianjin Huayuan Times Metal Products Co., Ltd	194.00
M & M Industries Co., Ltd	Tianjin Huayuan Metal Wire Products Co., Ltd	194.00
M & M Industries Co., Ltd	Tianjin Tianxin Metal Products Co., Ltd	194.00
M & M Industries Co., Ltd	Tianjin Jinghai County Yongshun Metal Products Mill	194.00
M & M Industries Co., Ltd	Huanghua Jinhai Hardware Products Co., Ltd	194.00
Shaanxi New Mile International Trade Co., Ltd	Tianjin Huayuan Metal Wire Products Co., Ltd	194.00
Shaanxi New Mile International Trade Co., Ltd	Tianjin Jinghai Yicheng Metal Products Co., Ltd	194.00
Shaanxi New Mile International Trade Co., Ltd	Tianjin Zhaohong Metal Products Co., Ltd	194.00
Shaanxi New Mile International Trade Co., Ltd	Tianjin Lianxing Metal Products Co., Ltd	194.00
Shaanxi New Mile International Trade Co., Ltd	Tianjin Beichen Gangjiaoxian Metal Products Co., Ltd., Fuli Branch.	194.00
Shaanxi New Mile International Trade Co., Ltd	Shenzhou Hongli Metal Products Co., Ltd	194.00
Hebei Cangzhou New Century Foreign Trade Co., Ltd	Tianjin Huayuan Metal Wire Products Co., Ltd	194.00
Hebei Cangzhou New Century Foreign Trade Co., Ltd	Tianjin Randa Metal Products Factory	194.00
Hebei Cangzhou New Century Foreign Trade Co., Ltd	Tianjin Jinghai Yicheng Metal Products Co., Ltd	194.00
Hebei Cangzhou New Century Foreign Trade Co., Ltd	Tianjin Jinghai Hongjiufeng Wire Products Co., Ltd	194.00
Hebei Cangzhou New Century Foreign Trade Co., Ltd	Huanghua Jinhai Hardware Products Co., Ltd	194.00
Dezhou Hualude Hardware Products Co., Ltd	Tianjin Jinghai Yicheng Metal Products Co., Ltd	194.00
Dezhou Hualude Hardware Products Co., Ltd	Tianjin Yinshan Industry and Trade Co., Ltd	194.00
Dezhou Hualude Hardware Products Co., Ltd	Tianjin Zhenyuan Industry and Trade Co., Ltd	194.00
Dezhou Hualude Hardware Products Co., Ltd	Dingzhou Xuri Metal Products Factory	194.00
Dezhou Hualude Hardware Products Co., Ltd	Huanghua Jinhai Hardware Products Co., Ltd	194.00
Dezhou Hualude Hardware Products Co., Ltd	Tianjin Dagang Wire Mill	194.00
Dezhou Hualude Hardware Products Co., Ltd	Tianjin Huayuan Industrial Company	194.00
Dezhou Hualude Hardware Products Co., Ltd	Hebei Yongwei Metal Products Co., Ltd	194.00
Dezhou Hualude Hardware Products Co., Ltd	Tianjin Guanshun Metal Products Co., Ltd	194.00
Shanghai SETI Enterprise International Co., Ltd	Shanghai Xiaoyu Metal Products Co., Ltd	194.00
Xi'an Metals and Minerals Import and Export Co., Ltd	Tianjin Jinyongtai Hardware Products Co., Ltd	194.00
Xi'an Metals and Minerals Import and Export Co., Ltd	Tianjin Hengfeng Metal Wire Co., Ltd	194.00
Xi'an Metals and Minerals Import and Export Co., Ltd	Shenzhou City Hongli Hardware Manufacturing Co., Ltd	194.00
Xi'an Metals and Minerals Import and Export Co., Ltd	Tianjin Dagang Jinding Metal Products Factory	194.00
PRC-Wide [44]		235.00

Disclosure

We will disclose the calculations performed within five days of the date of publication of this notice to parties in this proceeding in accordance with 19 CFR 351.224(b).

[44] The PRC-wide entity includes: Tianjin Honbase Machinery Manufactory Co., Ltd.; Anhui Bao Zhang Metal Products Co., Ltd.; Shanghai Bao Zhang Industry Co., Ltd.; Tianjin Huayuan Metal Wire Products Co., Ltd.; Tianjin Meijiahua Trade Co., Ltd.; Tianjin Huayuan Times Metal Products Co., Ltd.; Tianjin Tianxin Metal Products Co., Ltd.; Tianjin Jinghai Yicheng Metal Products Co., Ltd.; Anping Shuangmai Metal Products Co., Ltd.; Anping Xinhong Wire Mesh Co., Ltd.; Beijing Catic Industry Limited; Benxi Wasainuo Metal Packaging Production Co., Ltd.; China National Electronics Imp. & Exp. Ningbo Co., Ltd.; Easen Corp.; Ecms O/B Tianjin Huayuan Metal Wire; Hebei Dongfang Hardware And Mesh Co., Ltd.; Hebei Longda Trade Co., Ltd.; Huanghua Yufutai Hardware Products Co., Ltd.; Maccaferri (Changsha) Enviro-Tech Co.; Nantong Long Yang International Trade Co., Ltd.; Shandong Hualing Hardware & Tools Co. Ltd.; Shanghai Multi-development Enterprises; Shanghai Suntec Industries Co., Ltd.; Tianjin Jing Weida International Trade Co., Ltd.; Tianjin Pcss Trading Co., Ltd.; and Weifang Hecheng International Trade Co., Ltd.

Continuation of Suspension of Liquidation

In accordance with section 735(c)(1)(B) of the Act, we are directing U.S. Customs and Border Protection (''CBP'') to continue to suspend liquidation of all imports of merchandise subject to the investigation entered or withdrawn from warehouse, for consumption for the PRC-wide entity and the Separate Rate Recipients on or after November 4, 2011. We will instruct CBP to require a cash deposit or the posting of a bond equal to the weighted-average amount by which the NV exceeds U.S. price, as follows: (1) The rate for the exporter/producer combinations listed in the chart above will be the rate we have determined in this final determination; (2) for all PRC exporters of subject merchandise which have not received their own rate, the cash-deposit rate will be the PRC-wide rate; and (3) for all non-PRC exporters of subject merchandise which have not received their own rate, the cash-deposit rate will be the rate applicable to the PRC exporter/producer combination that supplied that non-PRC exporter. These suspension of liquidation instructions will remain in effect until further notice.

Additionally, the Department found in its final determination for the companion countervailing duty (''CVD'') investigation that Baozhang's merchandise benefited from export subsidies.[45] However, as noted above, we have determined that Baozhang is part of the PRC-wide entity in this proceeding. With respect to the PRC-wide entity, we have applied as AFA the highest rate from the Petition. Therefore, we will not instruct CBP to deduct any export subsidy from the PRC-wide entity's cash deposit rate.[46]

With respect to M&M Industries Co., Ltd., a separate rate recipient in this case, but a mandatory respondent in the companion CVD case to which total AFA was assigned, the Department

[45] *See Galvanized Steel Wire from the People's Republic of China: Final Affirmative Countervailing Duty Determination,* dated concurrently with this notice.

[46] *See, e.g., Drill Pipe From the People's Republic of China: Final Determination of Sales at Less Than Fair Value and Critical Circumstances,* 76 FR 1966, 1970 (January 11, 2011).

calculated the AFA rate for M&M Industries using program-specific rates calculated for the cooperating respondents. Therefore, in the CVD investigation, because there was only one export subsidy rate calculated (for Baozhang, a cooperative respondent in the CVD investigation), the export subsidy portion of the AFA-rate for M&M Industries is equal to the export subsidy rate calculated for Baozhang (0.21%). In addition, Baozhang's rate is the basis for the all-others rate in the CVD case. Therefore, we will instruct CBP to require a cash deposit or posting of a bond equal to the amount by which normal value exceeds U.S. price for the M&M Industries, reduced by the export subsidy rate (0.21%) found for all companies.

Further, with respect to the other companies receiving a separate rate in the instant investigation, excluding M&M Industries Co., Ltd., these companies are subject to the all-others rate in the companion CVD investigation. Moreover, as noted above, all companies were found to have the same amount of export subsidies, the amount found for the cooperative respondent in the CVD case. Therefore, for companies receiving a separate rate, we will instruct CBP to require a cash deposit or posting of a bond equal to the amount by which normal value exceeds U.S. price for the separate rate recipients, as indicated above, reduced by the export subsidy rate (0.21%) found for all companies.

Notification Regarding APO

This notice also serves as a reminder to the parties subject to administrative protective order (''APO'') of their responsibility concerning the disposition of proprietary information disclosed under APO in accordance with 19 CFR 351.305. Timely notification of return or destruction of APO materials or conversion to judicial protective order is hereby requested. Failure to comply with the regulations and the terms of an APO is a sanctionable violation.

This determination and notice are issued and published in accordance with sections 735(d) and 777(i)(1) of the Act.

Dated: March 19, 2012.

Paul Piquado,

Assistant Secretary for Import Administration.

Appendix I

Company-Specific Issues

Comment 1: The Department's Preliminary Determination With Respect to Tianjin Huayuan Metal Wire Products Co., Ltd. (''Huayuan'')

A. Whether the Department Incorrectly Determined Huayuan's Eligibility for a Separate Rate

B. Whether the Department Should Have Applied Adverse Facts Available (''AFA'') to Huayuan

C. Whether the Department Failed to Meet the Statutory Obligation to Verify Huayuan

Comment 2: Whether the Department Should Assign AFA to Tianjin Honbase Machinery Manufactory Co., Ltd. (''Tianjin Honbase'') and to Anhui Bao Zhang Metal Products Co., Ltd. (''Baozhang'')

General Issues

Comment 3: Whether Hobby Wire is Within the Scope of the Investigation

Comment 4: Surrogate Country Selection

Comment 5: Whether Double-Remedies Have Been Applied

Comment 6: Whether the NME Separate Rate Methodology is Contrary to Law and Should Be Eliminated

Comment 7: Appropriate Separate Rate to Assign to Cooperative Non-Selected Companies

[FR Doc. 2012–7212 Filed 3–23–12; 8:45 am]

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DEPARTMENT OF COMMERCE

International Trade Administration

[A–570–972]

Certain Stilbenic Optical Brightening Agents From the People's Republic of China: Final Determination of Sales at Less Than Fair Value

AGENCY: Import Administration, International Trade Administration, Department of Commerce.

DATES: *Effective Date:* March 26, 2012.

SUMMARY: On November 3, 2011, the Department of Commerce (the ''Department'') published its preliminary determination of sales at less than fair value (''LTFV'') in the antidumping investigation of certain stilbenic optical brightening agents (''stilbenic OBAs'') from the People's Republic of China (''PRC'').[1] The Department invited interested parties to comment on the *Preliminary Determination.* Based on the Department's analysis of the comments received, the Department has made changes from the *Preliminary Determination,* and continues to find that stilbenic OBAs from the PRC are being, or are likely to be, sold in the United States at LTFV, as provided in section 735 of the Tariff Act of 1930, as amended (the ''Act''). The final dumping margins for this investigation are listed in the ''Final Determination'' section below.

FOR FURTHER INFORMATION CONTACT: Shawn Higgins or Maisha Cryor, AD/CVD Operations, Office 4, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue NW., Washington, DC 20230; telephone: (202) 482–0679, or (202) 482–5831, respectively.

SUPPLEMENTARY INFORMATION:

Background

The Department published its *Preliminary Determination* of sales at LTFV and postponement of the final determination on November 3, 2011. Between November 7, 2011, and November 18, 2011, the Department conducted verification of mandatory respondents Zhejiang Transfar Whyyon Chemical Co., Ltd. (''Transfar'') and Zhejiang Hongda Chemicals Co., Ltd. (''Hongda'').[2] Clariant Corporation (''Petitioner''), Transfar, and Hongda submitted case briefs on January 6, 2012.[3] On January 11, 2012, Petitioner and Transfar filed rebuttal briefs. The Department conducted a public hearing on February 1, 2012.

Period of Investigation

The period of investigation (''POI'') is July 1, 2010, through December 31, 2010. This period corresponds to the two most recent fiscal quarters prior to the month of the filing of the petition, which was March 2011.[4]

Analysis of Comments Received

All issues raised in the case and rebuttal briefs by parties to this investigation are addressed in the Issues and Decision Memorandum.[5] A list of

[1] *See Certain Stilbenic Optical Brightening Agents from the People's Republic of China: Preliminary Determination of Sales at Less Than Fair Value and Postponement of Final Determination,* 76 FR 68148 (November 3, 2011) (''*Preliminary Determination*'').

[2] *See* the ''Verification'' section below.

[3] The Department rejected Transfar's original case brief because it contained untimely information. *See* Letter from Robert Bolling, Program Manager, AD/CVD Operations, Office 4, to Transfar, regarding Transfar's submission of untimely information (January 10, 2012). Transfar submitted a revised version of its case brief on January 13, 2012. *See* Letter from Transfar to the Secretary of Commerce, ''Certain Stilbenic Optical Brightening Agents from China'' (January 13, 2012) (''Transfar's Case Brief''); Letter from Transfar to the Secretary of Commerce, ''Certain Stilbenic Optical Brightening Agents from China'' (January 11, 2012) (''Transfar's Rebuttal Brief'').

[4] *See* 19 CFR 351.204(b)(1).

[5] *See* Memorandum from Christian Marsh, Deputy Assistant Secretary for Antidumping and Countervailing Duty Operations, to Paul Piquado, Assistant Secretary for Import Administration, ''Issues and Decision Memorandum for the Final Determination in the Antidumping Duty Investigation of Certain Stilbenic Optical Brightening Agents from the People's Republic of

these issues is attached to this notice as Appendix I. The Issues and Decision Memorandum is a public document and is on file electronically via Import Administration's Antidumping and Countervailing Duty Centralized Electronic Service System (''IA ACCESS''). Access to IA ACCESS is available in the Central Records Unit, room 7046 of the main Department of Commerce building. In addition, a complete version of the Issues and Decision Memorandum can be accessed directly on the Internet at *http://www.trade.gov/ia/.* The signed Issues and Decision Memorandum and the electronic versions of the Issues and Decision Memorandum are identical in content.

Changes Since the Preliminary Determination

- The Department changed the surrogate value (''SV'') for ocean freight to reflect shipping rates that actually occurred during the POI. In addition, the Department included certain additional charges (*i.e.,* fuel surcharges, destination delivery charges, and bill of lading charges) in the ocean freight calculation because these charges were not separately covered by the brokerage and handling SV.[6]
- The Department changed the SV for ice blocks from Global Trade Atlas import data to a value reported in the publication *Business Report Thailand.*[7]
- The Department made changes based on minor corrections presented at verification.[8]

Scope of the Investigation

The stilbenic OBAs covered by this investigation are all forms (whether free acid or salt) of compounds known as triazinylaminostilbenes (*i.e.,* all derivatives of 4,4'-bis [1,3,5- triazin-2-yl][9] amino-2,2'-stilbenedisulfonic acid), except for compounds listed in the following paragraph. The stilbenic OBAs covered by this investigation include final stilbenic OBA products, as well as intermediate products that are themselves triazinylaminostilbenes produced during the synthesis of stilbenic OBA products.

Excluded from this investigation are all forms of 4,4'-bis[4-anilino-6-morpholino-1,3,5-triazin-2-yl][10] amino-2,2'-stilbenedisulfonic acid, $C_{40}H_{40}N_{12}O_8S_2$ (''Fluorescent Brightener 71''). This investigation covers the above-described compounds in any state (including but not limited to powder, slurry, or solution), of any concentrations of active stilbenic OBA ingredient, as well as any compositions regardless of additives (*i.e.,* mixtures or blends, whether of stilbenic OBAs with each other, or of stilbenic OBAs with additives that are not stilbenic OBAs), and in any type of packaging.

These stilbenic OBAs are classifiable under subheading 3204.20.8000 of the Harmonized Tariff Schedule of the United States (''HTSUS''), but they may also enter under subheadings 2933.69.6050, 2921.59.4000 and 2921.59.8090. Although the HTSUS subheadings are provided for convenience and customs purposes, the written description of the merchandise is dispositive.

Verification

As provided in section 782(i) of the Act, the Department verified the information submitted by Transfar and Hongda for use in its final determination. The Department used standard verification procedures, including examination of relevant accounting and production records and original source documents provided by the respondents.[11]

Non-Market Economy Country

The Department considers the PRC to be a non-market economy (''NME'') country. In accordance with section 771(18)(C)(i) of the Act, any determination that a foreign country is an NME country shall remain in effect until revoked by the administering authority. The Department has not revoked the PRC's status as an NME country. No party has challenged the designation of the PRC as an NME country in this investigation. Therefore, the Department continues to treat the PRC as an NME for purposes of the final determination.

Surrogate Country

In the preliminary determination, the Department selected Thailand as the appropriate surrogate country for use in this investigation pursuant to section 773(c)(4) of the Act based on the following: (1) It is at a similar level of economic development as the PRC; (2) it is a significant producer of merchandise comparable to the merchandise under consideration; and (3) the record contains reliable data from Thailand that the Department can use to value the factors of production.[12] The Department has not made changes to these findings for the final determination.

Use of Facts Available and Adverse Facts Available

Section 776(a) of the Act provides that the Department shall apply facts available (''FA'') if (1) necessary information is not on the record, or (2) an interested party or any other person (A) withholds information that has been requested, (B) fails to provide information within the deadlines established, or in the form and manner requested by the Department, subject to subsections (c)(1) and (e) of section 782 of the Act, (C) significantly impedes a proceeding, or (D) provides information that cannot be verified as provided by section 782(i) of the Act.

Section 776(b) of the Act further provides that the Department may use an adverse inference in applying FA when a party has failed to cooperate by not acting to the best of its ability to comply with a request for information. Such an adverse inference may include

China'' (March 19, 2012) (''Issues and Decision Memorandum'').

[6] *See* Issues and Decision Memorandum at Comment 4; Memorandum from Maisha Cryor, International Trade Compliance Analyst, AD/CVD Operations, Office 4, to the File, ''Antidumping Duty Investigation of Certain Stilbenic Optical Brightening Agents from the People's Republic of China: Final Surrogate Value Memorandum'' (March 19, 2012) (''Final SV Memo'') at Attachment 2.

[7] *See* Issues and Decision Memorandum at Comment 3; Final SV Memo at Attachment 1.

[8] *See* Memorandum from Shawn Higgins, International Trade Compliance Analyst, AD/CVD Operations, Office 4, and Abdelali Elouaradia, Office Director, AD/CVD Operations, Office 4, to the File, ''Antidumping Duty Investigation of Certain Stilbenic Optical Brightening Agents from the People's Republic of China: Verification of the Antidumping Duty Questionnaire Responses of Zhejiang Hongda Chemicals Co., Ltd.'' (December 15, 2011) (''Hongda's Verification Report''); Memorandum from Maisha Cryor, International Trade Compliance Analyst, AD/CVD Operations, Office 4, to the File, ''Antidumping Duty Investigation of Certain Stilbenic Optical Brightening Agents from the People's Republic of China: Final Determination Analysis Memorandum for Zhejiang Hongda Chemicals Co., Ltd.'' (March 19, 2012); Memorandum from Shawn Higgins, International Trade Compliance Analyst, AD/CVD Operations, Office 4, and Maisha Cryor, International Trade Compliance Analyst, AD/CVD Operations, Office 4, to the File, ''Antidumping Duty Investigation of Certain Stilbenic Optical Brightening Agents from the People's Republic of China: Verification of the Antidumping Duty Questionnaire Responses of Zhejiang Transfar Whyyon Chemical Co., Ltd.'' (December 15, 2011) (''Transfar's Verification Report''); Memorandum from Shawn Higgins, International Trade Compliance Analyst, AD/CVD Operations, Office 4, to the File, ''Antidumping Duty Investigation of Certain Stilbenic Optical Brightening Agents from the People's Republic of China: Final Determination Analysis Memorandum for Zhejiang Transfar Whyyon Chemical Co., Ltd.'' (March 19, 2012).

[9] The brackets in this sentence are part of the chemical formula.

[10] *Id.*

[11] *See* Transfar's Verification Report; Hongda's Verification Report.

[12] *See* Memorandum to Abdelali Elouaradia from Shawn Higgins, ''Certain Stilbenic Optical Brightening Agents from the People's Republic of China: Surrogate Country Memorandum'' (October 27, 2011).

reliance on information derived from the petition, the final determination, a previous administrative review, or other information placed on the record.

PRC-Wide Entity

In the *Preliminary Determination,* the Department determined that certain PRC exporters/producers did not respond to the Department's requests for information including information pertaining to whether they were separate from the PRC-wide entity.[13] Thus, the Department has found that these PRC exporters/producers are part of the PRC-wide entity and the PRC-wide entity has not responded to requests for information.[14] No additional information was placed on the record with respect to any of these companies after the *Preliminary Determination.* Because the PRC-wide entity did not provide the Department with requested information, pursuant to section 776(a)(2)(A) of the Act, the Department continues to find it appropriate to base the PRC-wide rate on FA.

Because the PRC-wide entity did not respond to our request for information, the Department has determined that the PRC-wide entity has failed to cooperate to the best of its ability. Therefore, pursuant to section 776(b) of the Act, the Department has found that, in selecting from among the FA, an adverse inference is appropriate for the PRC-wide entity.

Because the Department begins with the presumption that all companies within an NME country are subject to government control and only the mandatory respondents have overcome that presumption, the Department is applying a single antidumping rate to all other exporters of merchandise under consideration from the PRC. Such companies have not demonstrated entitlement to a separate rate.[15] Accordingly, the PRC-wide entity rate applies to all entries of merchandise under consideration except for entries from Transfar and Hongda.

Selection of the Adverse Facts Available Rate for the PRC-Wide Entity

In selecting a rate for adverse facts available (''AFA''), the Department selects a rate that is sufficiently adverse ''as to effectuate the purpose of the adverse facts available rule to induce respondents to provide the Department with complete and accurate information in a timely manner.'' [16] Further, it is the Department's practice to select a rate that ensures ''that the party does not obtain a more favorable result by failing to cooperate than if it had cooperated fully.'' [17] It is the Department's practice to select as AFA the higher of (a) the highest margin alleged in the petition or (b) the highest rate calculated for any respondent in the investigation.[18] The highest margin alleged in the petition is 203.16 percent.[19] This rate is higher than any of the rates calculated for individually examined companies. Thus, as AFA, the Department's practice would be to assign the rate of 203.16 percent to the PRC-wide entity. However, in order to determine the probative value of the margins in the petition for use as AFA for purposes of this final determination, the Department examined information on the record and found that it was unable to corroborate either the highest margin in the petition or both its U.S. price and normal value components. In addition, the Department does not find the highest calculated weighted-average margin of the mandatory respondents to be sufficiently adverse to act as the AFA rate.[20] The Department finds, however, that the highest transaction-specific margin of the mandatory respondents (*i.e.,* 109.95 percent) is sufficiently adverse to serve as the AFA rate.[21] No corroboration of this rate is necessary because the Department is relying on information obtained in the course of this investigation, rather than secondary information.[22] This was the same methodology the Department employed in the *Preliminary Determination.* No interested party has commented on this methodology for calculating the PRC-wide rate.

The dumping margin for the PRC-wide entity applies to all entries of the merchandise under investigation except for entries of merchandise under investigation from the exporter/manufacturer combinations listed in the chart in the ''Final Determination'' section below.

Combination Rates

In the *Initiation Notice,* the Department stated that it would calculate combination rates for respondents that are eligible for a separate rate in this investigation.[23] This practice is described in Policy Bulletin 05.1.[24]

Final Determination

The Department determines that the following dumping margins exist for the period July 1, 2010, through December 31, 2010:

Exporter	Producer	Weighted average margin
Zhejiang Hongda Chemicals Co., Ltd	Zhejiang Hongda Chemicals Co., Ltd	95.29
Zhejiang Transfar Whyyon Chemical Co., Ltd	Zhejiang Transfar Whyyon Chemical Co., Ltd	63.98
PRC-wide Entity		109.95

[13] *See Preliminary Determination,* 76 FR at 68150.

[14] *Id.*

[15] *See Notice of Final Determination of Sales at Less Than Fair Market Value: Synthetic Indigo From the People's Republic of China,* 65 FR 25706, 25707 (May 2, 2000).

[16] *See Notice of Final Determination of Sales at Less than Fair Value: Static Random Access Memory Semiconductors From Taiwan,* 63 FR 8909, 8932 (Feb. 23, 1998).

[17] *See Brake Rotors from the People's Republic of China: Final Results and Partial Rescission of the Seventh Administrative Review; Final Results of the Eleventh New Shipper Review,* 70 FR 69937, 69939 (Nov. 18, 2005) (quoting the Statement of Administrative Action accompanying the Uruguay Round Agreements Act, H. Doc. No. 316, 103d Cong., 2d Sess. 870 (1994)).

[18] *See Seamless Refined Copper Pipe and Tube From the People's Republic of China: Final Determination of Sales at Less Than Fair Value,* 75 FR 60725, 60729 (October 1, 2010).

[19] *See Certain Stilbenic Optical Brightening Agents From the People's Republic of China and Taiwan: Initiation of Antidumping Duty Investigations,* 76 FR 23554, 23558 (April 27, 2011) (''*Initiation Notice*'').

[20] *See Multilayered Wood Flooring From the People's Republic of China: Final Determination of Sales at Less Than Fair Value,* 76 FR 64318, 64322 (October 18, 2011).

[21] *Id.*

[22] *See* 19 CFR 351.308(c) and (d) and section 776(c) of the Act; *Final Determination of Sales at Less Than Fair Value and Affirmative Determination of Critical Circumstances, in Part: Light-Walled Rectangular Pipe and Tube from the People's Republic of China,* 73 FR 35652, 35653 (June 24, 2008) and accompanying Issues and Decision Memorandum at Comment 1.

[23] *See Initiation Notice,* 76 FR at 23559.

[24] *See* Policy Bulletin 05.1: Separate Rates Practice and Application of Combination Rates in Antidumping Investigations involving Non-Market Economy Countries, available at *http://ia.ita.doc.gov/policy/bull05-1.pdf.*

Disclosure

The Department intends to disclose the calculations performed to parties in this proceeding within five days of the date of publication of this notice in accordance with 19 CFR 351.224(b).

Continuation of Suspension of Liquidation

In accordance with section 735(c)(1)(B) of the Act, the Department will instruct U.S. Customs and Border Protection (''CBP'') to continue to suspend liquidation of all appropriate entries of stilbenic OBAs from the PRC as described in the ''Scope of Investigation'' section, entered, or withdrawn from warehouse, for consumption on or after November 3, 2011, the date of publication of the *Preliminary Determination* in the **Federal Register**. The Department will instruct CBP to require a cash deposit or the posting of a bond equal to the weighted-average amount by which the normal value exceeds U.S. price, as indicated above.

International Trade Commission Notification

In accordance with section 735(d) of the Act, we have notified the International Trade Commission (''ITC'') of the final affirmative determination of sales at LTFV. As the Department's final determination is affirmative, in accordance with section 735(b)(2) of the Act, the ITC will determine, within 45 days, whether the domestic industry in the United States is materially injured, or threatened with material injury, by reason of imports, or sales (or the likelihood of sales) for importation, of the merchandise under consideration. If the ITC determines that such injury does exist, the Department will issue an antidumping duty order directing CBP to assess, upon further instruction by the Department, antidumping duties on all imports of the merchandise under consideration entered, or withdrawn from warehouse, for consumption on or after the effective date of the suspension of liquidation.

Notification Regarding APO

This notice also serves as a reminder to the parties subject to administrative protective order (''APO'') of their responsibility concerning the disposition of propriety information disclosed under APO in accordance with 19 CFR 351.305. Timely notification of return or distruction of APO materials or conversion to judicial protective order is hereby requested. Failure to comply with the regulations and terms of an APO is a sanctionable violation.

This determination is issued and published in accordance with sections 735(d) and 777(i)(1) of the Act.

Dated: March 19, 2012.

Paul Piquado,

Assistant Secretary for Import Administration.

Appendix I

Issues for Final Determination

Issue 1: Whether the Department Should Revise the Surrogate Value for 4,4′-Diamino-2,2′ Stilbenedisulfonic Acid
Issue 2: Whether the Department Should Revise the Calculation of the Surrogate Financial Ratios
Issue 3: Whether the Department Should Revise the Surrogate Value for Ice Blocks
Issue 4: Whether the Department Should Revise the Surrogate Value for Ocean Freight
Issue 5: Whether the Department Should Revise the Surrogate Value for Brokerage and Handling
Issue 6: Whether the Department Should Revise the Surrogate Value for Labor

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DEPARTMENT OF COMMERCE

International Trade Administration

[C–570–980]

Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, From the People's Republic of China: Preliminary Affirmative Countervailing Duty Determination

AGENCY: Import Administration, International Trade Administration, Department of Commerce.

SUMMARY: The Department of Commerce (the Department) preliminarily determines that countervailable subsidies are being provided to producers and exporters of crystalline silicon photovoltaic cells, whether or not assembled into modules (solar cells) from the People's Republic of China (PRC). For information on the estimated subsidy rates, *see* the ''Suspension of Liquidation'' section of this notice.

DATES: *Effective Date:* March 26, 2012.

FOR FURTHER INFORMATION CONTACT: Gene Calvert, Jun Jack Zhao, or Emily Halle, AD/CVD Operations, Office 6, Import Administration, U.S. Department of Commerce, Room 7866, 14th Street and Constitution Avenue NW., Washington, DC 20230; telephone: (202) 482–3586, (202) 482–1396, or (202) 482–0176, respectively.

SUPPLEMENTARY INFORMATION:

Case History

The Department initiated a countervailing duty (CVD) investigation of solar cells from the PRC on November 8, 2011.[1] Since the initiation, the following events have occurred. The Department released U.S. Customs and Border Protection (CBP) entry data for U.S. imports of solar cells from the PRC for the period January 1, 2010, through December 31, 2010, to be used as the basis for respondent selection. The CBP entry data covered products included in this investigation which entered under the Harmonized Tariff Schedule of the United States (HTSUS) numbers likely to include subject merchandise: 8541.40.6020 and 8541.40.6030. The entry data did not cover entries under the other HTSUS numbers included in the scope description below because those numbers represent broad basket categories. In the memorandum releasing the entry data, the Department stated that, because the subject merchandise is imported as either solar cells or solar cells assembled into modules or panels, and thus quantity is not recorded consistently in the entry data, the Department intended to select respondents based on the aggregate value (as opposed to quantity) of subject merchandise that was imported into the United States.

On November 29, 2011, the Department completed its respondent selection analysis. Given available resources, the Department determined it could examine no more than two producers/exporters and selected Changzhou Trina Solar Energy Co., Ltd. (Trina Solar) and Wuxi Suntech Power Co., Ltd. (Wuxi Suntech) as mandatory respondents.[2] These companies were the two largest producers/exporters of subject merchandise, based on aggregate value, to the United States.

On December 5, 2011, the petitioner, Solar World Industries, America, Inc. (Petitioner), submitted an additional subsidy allegation, claiming that the government of the PRC (GOC), through state-owned enterprises (SOEs),

[1] *See Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, From the People's Republic of China: Initiation of Countervailing Duty Investigation*, 76 FR 70966 (November 16, 2011) (*Initiation Notice*), and accompanying Initiation Checklist. Public documents and public versions of proprietary Departmental memoranda referenced in this notice are on file electronically on Import Administration's Antidumping and Countervailing Duty Centralized Electronic Services System (IA ACCESS), accessible via the Central Records Unit, Room 7046 of the main Commerce building and on the web at http://ia.ita.doc.gov/frn/.

[2] *See* Memorandum to Christian Marsh, Deputy Assistant Secretary for Antidumping and Countervailing Duty Operations, ''Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, from the People's Republic of China, Countervailing Duty Investigation: Respondent Selection,'' November 29, 2011 (Respondent Selection Memorandum).

provides glass to Chinese producers of subject merchandise for less than adequate remuneration (LTAR). The Department issued the CVD questionnaire to the GOC on December 7, 2011. Copies of the questionnaire were also sent to the mandatory company respondents. On December 16, 2011, Petitioner submitted a request to extend the preliminary determination 30 days, from January 12 to February 13, 2012. On December 19, 2011, Petitioner submitted an allegation that Wuxi Suntech was uncreditworthy from 2005 through 2010. On December 22, 2011, Petitioner submitted an allegation that Trina Solar was uncreditworthy from 2005 through 2010. Also on December 22, 2011, the Department determined not to initiate an investigation of Petitioner's December 5, 2011, allegation that the GOC provides glass for LTAR, stating that Petitioner did not support its allegation with reasonably available information, pursuant to section 702(b)(1) of the Tariff Act of 1930, as amended (the Act). On December 29, 2011, the Department published in the **Federal Register** a 30-day postponement of the preliminary determination until February 11, 2012.[3]

On January 3, 2012, Wuxi Suntech requested an extension of the January 13 deadline for responding to the Department's December 7, 2011 questionnaire. On January 5, 2012, the GOC and Trina Solar each requested an extension of the January 13 deadline for responding to the questionnaire. The Department extended the deadline until January 23, 2012.

On January 3, 2012, the GOC requested that the Department terminate the CVD investigation, stating that, in a recent decision, the U.S. Court of Appeals for the Federal Circuit found that the Department does not have the authority to apply the CVD law to countries the Department considers non-market economies (NMEs).[4] On January 6, 2012, Trina Solar, Wuxi Suntech, and other interested parties requested that the Department terminate the CVD investigation, also citing the *GPX* ruling. On January 26, 2012, interested parties DelSolar Co., Ltd. and DelSolar (Wujiang) Ltd. also requested that the CVD investigation be terminated, citing *GPX.*

On January 9, 2012, Trina Solar and Wuxi Suntech each requested that the Department further extend the deadline for the preliminary determination by an additional 35 days, noting the Department had the authority to do so in extraordinary circumstances. In these same submissions, both Trina Solar and Wuxi Suntech also requested an additional extension of the deadline for responding to the Department's December 7, 2011 questionnaire. Also on January 9, 2012, the GOC reiterated its January 5, 2012 request for additional time to respond to the Department's December 7, 2011 questionnaire, requesting the deadline be extended to February 3, 2012. On January 19, 2012, Petitioner requested that the Department extend the deadline for submitting additional subsidy allegations. Based on this request from Petitioner, the Department extended this deadline until February 10, 2012. Also on January 19, 2012, Petitioner requested that the preliminary determination be further extended until March 2, 2012. On January 23, Petitioner re-submitted its allegation that the GOC provided solar cells producers with glass for LTAR. On January 19, 2012, the Department extended the deadline until January 31, 2012, for the GOC, Trina Solar, and Wuxi Suntech to respond to the Department's December 7, 2011 questionnaire. On January 31, 2012, the Department published in the **Federal Register** the second postponement of the preliminary determination until March 2, 2012.[5] Also on January 31, 2012, the GOC, Trina Solar, and Wuxi Suntech each submitted timely responses to the Department's December 7, 2011 questionnaire.

On February 9, 2012, Petitioner submitted a request to extend further the deadline for submitting additional subsidy allegations. Based on this request from Petitioner, the Department extended the deadline until February 14, 2012, for submitting additional subsidy allegations. Also on February 9, 2012, the Department issued supplemental questionnaires to Trina Solar and Wuxi Suntech. On February 14, 2012, Trina Solar and Wuxi Suntech each requested that the Department extend the deadline until February 29, 2012, for responding to the February 9, 2012 supplemental questionnaire. In its submission, Wuxi Suntech also reiterated its January 9, 2012 request to extend fully the deadline for the preliminary determination. The Department extended the supplemental questionnaire response deadline to February 27, 2012, for Trina Solar and Wuxi Suntech. On February 14, 2012, Petitioner submitted five additional new subsidy allegations. The Department has not yet reached a determination of whether to include these five additional allegations, or the uncreditworthiness allegations noted above, in the investigation, but intends to do so after the issuance of this preliminary determination.

On February 15, 2012, the Department issued a supplemental questionnaire to the GOC. On February 17, 2012, the GOC requested an extension until March 5, 2012, for responding to the Department's February 15, 2012 supplemental questionnaire. The Department extended the deadline until March 1, 2012. On February 22, 2012, the Department published in the **Federal Register** the third postponement of the preliminary determination in the CVD investigation, postponing the preliminary determination until March 17, 2012.[6] Between February 22 and February 24, 2012, Petitioner submitted comments on the initial questionnaire responses submitted by the GOC, Trina Solar, and Wuxi Suntech. On February 27, 2012, Trina Solar and Wuxi Suntech each submitted timely responses to the Department's February 9, 2012 supplemental questionnaire. The GOC timely submitted its response to the supplemental questionnaire on March 1, 2012. On March 7, 2012, Trina Solar submitted comments to be considered in the Department's preliminary determination, and Petitioner submitted its pre-preliminary determination comments on March 8, 2012. Also on March 8, 2012, the Department initiated the new subsidy allegation for the provision of glass at LTAR. On March 9, 2012, Petitioner submitted new factual information for the Department to consider in the preliminary determination. On March 12, 2012, the GOC submitted pre-preliminary comments, and Petitioner submitted comments in response to Trina Solar's March 7, 2012 comments. On March 13, 2012, Wuxi Suntech submitted pre-preliminary comments, as well as comments on Petitioner's December 19, 2011 and February 28, 2012 letters regarding Wuxi Suntech's creditworthiness.

[3] *See Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, From the People's Republic of China: Postponement of Preliminary Determination in the Countervailing Duty Investigation,* 76 FR 81914 (December 29, 2011).

[4] *GPX Int'l Tire Corp.* v. *United States,* 666 F.3d 732 (Fed. Cir. 2011) (*GPX*).

[5] *See Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, From the People's Republic of China: Second Postponement of the Preliminary Determination in the Countervailing Duty Investigation,* 77 FR 4764 (January 31, 2012).

[6] *See Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, From the People's Republic of China: Postponement of Preliminary Determination in the Countervailing Duty Investigation,* 77 FR 10478 (February 22, 2012).

Scope Comments

In accordance with the preamble to the Department's regulations, in our *Initiation Notice* we set aside a period of time for parties to raise issues regarding product coverage, and encouraged all parties to submit comments within 20 calendar days of that notice.[7] Between November 23, 2011 and March 14, 2012, we received numerous comments concerning the scope of the investigations. Based on these comments, the Department has clarified the scope of the investigation. The revised scope is set forth in the ''Scope of Investigation'' section below. A full discussion of the Department's preliminary conclusions regarding these scope comments are set forth in a memorandum issued concurrently with this notice.[8]

Scope of the Investigation

The merchandise covered by this investigation are crystalline silicon photovoltaic cells, and modules, laminates, and panels, consisting of crystalline silicon photovoltaic cells, whether or not partially or fully assembled into other products, including, but not limited to, modules, laminates, panels and building integrated materials.

This investigation covers crystalline silicon photovoltaic cells of thickness equal to or greater than 20 micrometers, having a p/n junction formed by any means, whether or not the cell has undergone other processing, including, but not limited to, cleaning, etching, coating, and/or addition of materials (including, but not limited to, metallization and conductor patterns) to collect and forward the electricity that is generated by the cell.

Subject merchandise may be described at the time of importation as parts for final finished products that are assembled after importation, including, but not limited to, modules, laminates, panels, building-integrated modules, building-integrated panels, or other finished goods kits. Such parts that otherwise meet the definition of subject merchandise are included in the scope of this investigation.

Excluded from the scope of this investigation are thin film photovoltaic products produced from amorphous silicon (a-Si), cadmium telluride (CdTe), or copper indium gallium selenide (CIGS).

Also excluded from the scope of this investigation are crystalline silicon photovoltaic cells, not exceeding 10,000mm^2 in surface area, that are permanently integrated into a consumer good whose function is other than power generation and that consumes the electricity generated by the integrated crystalline silicon photovoltaic cell. Where more than one cell is permanently integrated into a consumer good, the surface area for purposes of this exclusion shall be the total combined surface area of all cells that are integrated into the consumer good.

Modules, laminates, and panels produced in a third-country from cells produced in the PRC are covered by this investigation; however, modules, laminates, and panels produced in the PRC from cells produced in a third-country are not covered by this investigation.

Merchandise covered by this investigation is currently classified in the Harmonized Tariff System of the United States (HTSUS) under subheadings 8501.61.0000, 8507.20.80, 8541.40.6020 and 8541.40.6030. These HTSUS subheadings are provided for convenience and customs purposes; the written description of the scope of this investigation is dispositive.

Injury Test

Because the PRC is a ''Subsidies Agreement Country'' within the meaning of section 701(b) of the Act, the U.S. International Trade Commission (ITC) is required to determine whether imports of the subject merchandise from the PRC materially injure, or threaten material injury to, a U.S. industry. On December 16, 2011, the ITC published its preliminary determination that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of solar cells from the PRC.[9]

Application of the Countervailing Duty Law to Imports From the PRC

On October 25, 2007, the Department published its final determination on coated free sheet paper from the PRC.[10] In *CFS from the PRC,* the Department found that

> * * *given the substantial differences between the Soviet-style economies and China's economy in recent years, the Department's previous decision not to apply the CVD law to these Soviet-style economies does not act as a bar to proceeding with a CVD investigation involving products from China.[11]

The Department has affirmed its decision to apply the CVD law to the PRC in numerous subsequent determinations.[12] Furthermore, on March 13, 2012, HR 4105 was enacted which makes clear that the Department has the authority to apply the CVD law to NMEs such as the PRC. The effective date provision of the enacted legislation makes clear that this provision applies to this proceeding.[13]

Additionally, for the reasons stated in the CWP from the PRC Decision Memorandum, we are using the date of December 11, 2001, the date on which the PRC became a member of the World Trade Organization (WTO), as the date from which the Department will identify and measure subsidies in the PRC for purposes of CVD investigations.[14]

Preliminary Determination of Critical Circumstances

On January 27, 2012, the Department determined that critical circumstances exist with respect to imports of solar cells from the PRC for Trina Solar, Wuxi Suntech, and all other PRC producers or exporters, finding that there have been massive imports of subject merchandise over a relatively short period of time by these entities.[15] Further, at this preliminary stage, the Department continues to have a reasonable basis to believe or suspect that there are countervailable subsidies inconsistent with the Subsidies and Countervailing Measures Agreement of the WTO. As a result, we will instruct CBP to suspend liquidation of all entries of the subject

[7] *See Antidumping Duties; Countervailing Duties,* 62 FR 27296, 27323 (May 19, 1997); *see also Initiation Notice,* 76 FR at 70967.

[8] *See* Memorandum to Christian Marsh, Deputy Assistant Secretary, Antidumping and Countervailing Duty Operations, from Jeff Pedersen, Case Analyst, ''Scope Clarification: Antidumping and Countervailing Duty Investigations of Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, from the People's Republic of China,'' March 19, 2012.

[9] *See Crystalline Silicon Photovoltaic Cells from China, Investigation Nos. 701 TA–481 and 731–TA–1190, Preliminary,* 76 FR 78313 (December 16, 2011).

[10] *See Coated Free Sheet Paper from the People's Republic of China: Final Affirmative Countervailing Duty Determination,* 72 FR 60645 (October 25, 2007) (*CFS from the PRC*), and accompanying Issues and Decision Memorandum (CFS from the PRC Decision Memorandum).

[11] *See* CFS from the PRC Decision Memorandum at Comment 6.

[12] *See, e.g., Circular Welded Carbon Quality Steel Pipe from the People's Republic of China: Final Affirmative Countervailing Duty Determination and Final Affirmative Determination of Critical Circumstances,* 73 FR 31966 (June 5, 2008), and accompanying Issues and Decision Memorandum (CWP from the PRC Decision Memorandum) at Comment 1.

[13] *See* HR 4105, 112th Cong. § 1(b) (2012) (enacted).

[14] *See, e.g.,* CWP from the PRC Decision Memorandum at Comment 2.

[15] *See Countervailing Duty Investigation of Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, From the People's Republic of China: Preliminary Determination of Critical Circumstances,* 77 FR 5487 (February 3, 2012).

merchandise from the PRC that are entered or withdrawn from warehouse, for consumption on or after the date 90 days prior to the date of publication of this notice in the **Federal Register**, and to require a cash deposit or bond for such entities of the merchandise in the amounts indicated in the section ''Suspension of Liquidation,'' below. Parties will have the opportunity to comment on the Department's preliminary determination of critical circumstances in their case briefs for the final determination.

Voluntary Respondents

On November 17, 2011, CNPV Dongying Solar Power Company Limited requested that it be selected as a voluntary respondent, if the company was not selected as a mandatory respondent. Also on November 17, 2011, Yingli Green Energy Holding Company Limited and Yingli Green Energy Americas, Inc. requested that they be selected collectively as a voluntary respondent. On November 22, 2011, both Trina Solar and Wuxi Suntech requested that they be selected as voluntary respondents. Jiangsu Green Power PV Co., Ltd. requested that it be selected as a voluntary respondent on November 28, 2011. On December 23, 2011, Motech (Suzhou) Renewable Energy Co., Ltd. requested that it be a selected as a voluntary respondent.

In the Respondent Selection Memorandum, the Department explained that it did not have resources available to examine any of the several parties, noted above, requesting to be investigated as voluntary respondents.[16] Therefore, we continued, we would not examine any voluntary respondents unless one of the mandatory respondents failed to cooperate. In such event, we noted, any party requesting to be a voluntary respondent would have to be in compliance with four criteria, one of which was the submission of questionnaire responses in accordance with deadlines established for the mandatory respondents.[17] Subsequently, both mandatory respondents have cooperated and no voluntary respondent applicant submitted any questionnaire responses. Therefore, we are not calculating individual rates for any of the voluntary respondent applicants.

Use of Facts Otherwise Available and Adverse Inferences

Sections 776(a)(1) and (2) of the Act provide that the Department shall apply ''facts otherwise available'' if necessary information is not on the record or if an interested party or any other person: (A) Withholds information that has been requested; (B) fails to provide information within the deadlines established, or in the form and manner requested by the Department, subject to subsections (c)(1) and (e) of section 782 of the Act; (C) significantly impedes a proceeding; or (D) provides information that cannot be verified as provided by section 782(i) of the Act.

Section 776(b) of the Act further provides that the Department may use an adverse inference in applying the facts otherwise available when a party has failed to cooperate by not acting to the best of its ability to comply with a request for information. Section 776(b) of the Act also authorizes the Department to use as adverse facts available (AFA), information derived from the petition, the final determination, a previous administrative review, or other information placed on the record.

Section 776(c) of the Act provides that, when the Department relies on secondary information rather than on information obtained in the course of an investigation or review, it shall, to the extent practicable, corroborate that information from independent sources that are reasonably at its disposal. Secondary information is defined as ''{i}nformation derived from the petition that gave rise to the investigation or review, the final determination concerning the subject merchandise, or any previous review under section 751 concerning the subject merchandise.'' [18] For purposes of this preliminary determination, we find it necessary to apply AFA in the following circumstances. However, we are not relying upon ''secondary information'' in our application of AFA in the following circumstances.

Application of AFA: Polysilicon Producers Are ''Authorities''

As discussed below under the section ''Programs Preliminarily Determined to be Countervailable,'' the Department is investigating the provision of polysilicon for LTAR by the GOC. We requested information from the GOC regarding the specific companies that produced this input product that Trina Solar and Wuxi Suntech purchased during the period of investigation (POI). Specifically, we sought information from the GOC that would allow us to determine whether the producers are ''authorities'' within the meaning of section 771(5)(B) of the Act. In our original and supplemental questionnaires, we requested detailed information from the GOC that would be needed for this analysis.

For each producer in which the GOC was a majority owner, we stated that the GOC needed to provide the following information that is relevant to our analysis of whether that producer is an ''authority.''

- Translated copies of source documents that demonstrate the producer's ownership during the POI, such as capital verification reports, articles of association, share transfer agreements, or financial statements.
- The names of the ten largest shareholders and the total number of shareholders.
- The identification of any government ownership or other affiliations between the ten largest shareholders and the government.
- Total level of state ownership of the company's shares and the names of all government entities that own shares in the producer
- Any other relevant evidence the GOC believes demonstrates that the company is not controlled by the government.

For each producer that the GOC claimed was privately owned by individuals or companies during the POI, we requested the following.

- Translated copies of source documents that demonstrate the producer's ownership during the POI, such as capital verification reports, articles of association, share transfer agreements, or financial statements.
- Identification of the owners, members of the board of directors, or managers of the producers who were also government or Chinese Communist Party (CCP) officials or representatives during the POI.
- A statement regarding whether the producer had ever been an SOE, and, if so, whether any of the current owners, directors, or senior managers had been involved in the operations of the company prior to its privatization.
- A discussion of whether and how operational or strategic decisions made by the management or board of directors are subject to government review or approval.

Finally, for producers owned by other corporations (whether in whole or in part) or with less-than-majority state ownership during the POI, we requested information tracing the ownership of the producer back to the ultimate individual or state owners. For such producers, we requested the following information.

[16] Respondent Selection Memorandum at 5.

[17] *Id.* at 6.

[18] *See* Statement of Administrative Action accompanying the Uruguay Round Agreements Act, H. Doc. No. 316, 103d Cong. 2d Session, at 870 (1994).

• The identification of any state ownership of the producer's shares; the names of all government entities that own shares, either directly or indirectly, in the producer; the identification of all owners considered ''SOEs'' by the GOC; and the amount of shares held by each government owner.

• For each level of ownership, identification of the owners, directors, or senior managers of the producer who were also government or CCP officials during the POI.

• A discussion of whether and how operational or strategic decisions made by the management or board of directors are subject to government review or approval.

• A statement regarding whether any of the shares held by government entities have any special rights, priorities, or privileges with regard to voting rights or other management or decision-making powers of the company; a statement regarding whether there are restrictions on conducting, or acting through, extraordinary meetings of shareholders; a statement regarding whether there are any restrictions on the shares held by private shareholders; and a discussion of the nature of the private shareholders' interests in the company (*e.g.,* operational, strategic, or investment-related).

In its questionnaire response on January 31, 2012, the GOC provided incomplete ownership information for nearly all of the companies that produced polysilicon purchased by Trina Solar and Wuxi Suntech. For the vast majority of these producers, it provided none of the information requested in the standard ''input producers'' appendix the Department issues to determine the individual owners of producers and to determine the extent of GOC control, if any, over the producers.[19] For example, for the vast majority of producers, it did not provide capital verification reports, articles of association, business registrations, or any other documents demonstrating the producers' ownership. For other producers, it provided some information, but not enough to trace ownership back to the ultimate individual owners, as the questionnaire requested. Further, it provided no information at all regarding the identification of owners, directors, or senior managers who were also GOC or CCP officials or representatives. On February 15, 2012, we issued a supplemental questionnaire to the GOC requesting that it provide the remaining ownership information for the polysilicon producers. We also requested that the GOC respond to the questions above regarding the role, if any, that GOC and CCP officials and representatives had as owners, directors, or senior managers of the producers, or explain in detail the efforts it undertook to obtain the requested information.[20]

In its March 1, 2012 response, the GOC did not provide any information regarding the role of GOC and CCP officials and representatives, nor did the GOC explain the efforts it undertook to obtain the requested information. The GOC provided further ownership information, but the information provided was still incomplete in that no ownership information was provided for some companies, and, in other instances, the ownership information provided was not sufficient to determine the ultimate individual owners.[21] In the GOC's submission, several companies' ownership is deemed ''uncertain'' by the GOC itself. The GOC informed the Department that it was still gathering the requested ownership information and that it expected to submit this information at a later date.[22]

In addition to not providing all of the requested information regarding government and CCP officials and representatives, the GOC also declined to answer questions about the CCP's structure and functions that are relevant to our determination of whether the producers of polysilicon are ''authorities'' within the meaning of section 771(5)(B) of the Act. In its initial questionnaire response, the GOC objected to our questions, stating that the CCP, along with other related organizations, is not a government organization and that the involvement of CCP officials in the management or operations of the input producers ''does not lead to interference by the Chinese government in the management and operation of the input supplier.''[23] Additionally, the GOC stated that Chinese law prohibits GOC officials from taking positions in private companies.[24] Furthermore, the GOC stated that ''there is no central informational database to search for the requested information and the industry and commerce administration does not require the companies to provide such information.''[25] As such, the GOC claimed it was unable to respond to the Department's questions.[26]

Regarding the GOC's objection to the Department's questions about the role of CCP officials in the management and operations of the polysilicon producers, we have explained our understanding of the CCP's involvement in the PRC's economic and political structure in a past proceeding.[27] Public information suggests that the CCP exerts significant control over activities in the PRC.[28] This conclusion is supported by, among other documents, a publicly available background report from the U.S. Department of State.[29] With regard to the GOC's claim that Chinese law prohibits GOC officials from taking positions in private companies, we have previously found that this particular law does not pertain to CCP officials.[30]

Because the GOC did not respond to our requests for information on this issue, we have no further basis for evaluating the GOC's claim that the role of the CCP is irrelevant. Thus, the Department finds, as it has in past investigations, that the information requested regarding the role of CCP officials in the management and operations of the polysilicon producers, and in the management and operations of the producers' owners, is necessary to our determination of whether these producers are authorities within the meaning of section 771(5)(B) of the Act. In addition, the GOC did not promptly notify the Department, in accordance with section 782(c), that it was unable to submit the information requested in the requested form and manner, nor did it suggest any alternative forms for submitting this information. Further, the GOC did not provide any information regarding the attempts it undertook to obtain this information, despite the fact that we provided the GOC with a second opportunity to provide the information

[19] *See* the GOC's January 31, 2012 questionnaire response.

[20] *See* February 15, 2012 supplemental questionnaire to the GOC.

[21] *See* Memorandum to the File from Emily Halle, ''Analysis of the GOC's Responses to the Input Producers Appendix,'' March 19, 2012.

[22] *See* the GOC's March 1, 2012 supplemental questionnaire response at 34–38.

[23] *See* the GOC's January 31, 2012 questionnaire response at II–96.

[24] *See id.* at II–98.

[25] *See id.* at II–101.

[26] *See id.*

[27] *See* Memorandum to the File from Emily Halle, ''Additional Documents for Preliminary Determination,'' March 19, 2012 (Additional Documents Memorandum) at Attachments III and IV (which include the post-preliminary analysis memorandum from certain seamless carbon and alloy steel standard, line, and pressure pipe and a State Department report, both recognizing the significant role the CCP has in the GOC).

[28] *See id.* at Attachment IV.

[29] *See id.; see also Certain Seamless Carbon and Alloy Steel Standard, Line, and Pressure Pipe From the People's Republic of China: Final Affirmative Countervailing Duty Determination, Final Affirmative Critical Circumstances Determination,* 75 FR 57444 (September 21, 2010) (*Seamless Pipe Final Determination*), and accompanying Issues and Decision Memorandum (Seamless Pipe From the PRC Decision Memorandum) at Comment 7.

[30] *See* Seamless Pipe from the PRC Decision Memorandum at 16.

and significant extensions for responding to both the original and supplemental questionnaires. Therefore, we have no basis to accept the GOC's claim that it is unable to provide this information. This is particularly appropriate given that the GOC has informed the Department that such information regarding the CCP is irrelevant, when the Department has made it abundantly clear on the record of this investigation and previous investigations that such information is relevant to our analysis of whether input producers are ''authorities'' under the statute.

Therefore, we preliminarily determine that the GOC has withheld necessary information that was requested of it and, thus, that the Department must rely on ''facts otherwise available'' in making our preliminary determination.[31] Moreover, we preliminarily determine that the GOC has failed to cooperate by not acting to the best of its ability to comply with our request for information. By stating that the requested information is not relevant, the GOC has placed itself in the position of the Department, and only the Department can determine what is relevant to its investigation.[32] Furthermore, stating that it is unable to obtain the information because the CCP is not the government is effectively telling the Department it must reach the conclusion based on the statements of the GOC without any of the information that the Department considers necessary and relevant to evaluating fully the role of the CCP in the government and in input producers. Consequently, we determine that the GOC has withheld information and impeded the investigation, and that an adverse inference is warranted in the application of facts available.[33] As AFA, we are finding that all of the producers of polysilicon purchased by the respondents during the POI are ''authorities'' within the meaning of section 771(5)(B) of the Act.

Application of AFA: The Provision of Polysilicon is Specific to Solar Cells Producers

The Department asked the GOC to provide a list of industries in the PRC that purchase polysilicon directly and to provide the amounts (volume and value) purchased by each of the industries, including the solar cells industry.[34] The GOC did not respond as requested, but instead simply stated that it did ''not impose any limitations on the use of polysilicon'' and that ''polysilicon has a wide range of uses, including but not limited to use in the solar and semiconductor industries.'' [35] The Department asked this question again in its supplemental to the GOC, and again the GOC did not provide the requested information, but simply stated once more that ''polysilicon has a wide range of uses, including but not limited to use in the solar and semiconductor industries.'' [36]

Therefore, we preliminarily determine that the GOC has withheld necessary information that was requested of it and, thus, that the Department must rely on ''facts available'' in making our preliminary determination.[37] Moreover, we preliminarily determine that the GOC has failed to cooperate by not acting to the best of its ability to comply with our request for information. Consequently, an adverse inference is warranted in the application of facts available.[38] In drawing an adverse inference, we find that the GOC's provision of polysilicon to solar cells producers is specific within the meaning of section 771(5A) of the Act. For details regarding the remaining elements of our analysis, *see* the ''Provision of Polysilicon for LTAR'' section below.

Application of AFA: Land Provided to Trina Solar Is Specific to the Solar Cells Industry

In the initial questionnaire, the Department stated that if the GOC claimed that the provision of land or land-use rights to the respondents was not contingent upon any particular status or activity (*e.g.,* being a solar cells producer or residing in an industrial park), the GOC must provide a discussion of how the prices paid by the respondents were determined. The Department requested that the GOC provide information on the policies of the relevant local governments that had jurisdiction over the land and land-use rights. The GOC responded that it ''does not direct the price of land or land-use rights, which were established between the mandatory respondents and local governments.''[39] In its questionnaire response, Trina Solar explained that its land-use rights had been purchased through a public bidding process and that all of its land was located in an industrial park. Therefore, in our supplemental questionnaire to the GOC, we asked the GOC to provide information regarding the public bidding process, demonstrating, among other things, the floor prices of these auctions, the public notices inviting bids, and the number of bidders for all of Trina Solar's land-use rights purchases. The GOC provided the requested information for only one of the tracts of land provided by the local land bureau to Trina Solar. In providing this information, the GOC stated: ''The GOC has obtained and provides information relating to the fifth piece of Trina's land, but does not warrant that the information provided below regarding the fifth piece of land is representative for the other pieces of land for Trina.''[40]

Because the GOC did not provide complete responses to either the Department's initial or supplemental questions regarding the derivation of the prices paid by Trina Solar for land-use rights, the Department is unable to determine whether or not the provision of these land use rights was specific. Therefore, we preliminarily determine that the GOC has withheld necessary information that was requested of it and, thus, that the Department must rely on facts available in making our preliminary determination for all of Trina Solar's tracts. Moreover, we preliminarily determine that the GOC has failed to cooperate by not acting to

[31] *See* sections 776(a)(1) and (a)(2)(A) of the Act.

[32] *See Ansaldo Componenti, S.p.A.* v. *United States,* 628 F. Supp. 198, 205 (CIT 1986) (stating that ''{i}t is Commerce, not the respondent, that determines what information is to be provided''). The Court in *Ansaldo* criticized the respondent for refusing to submit information which the respondent alone had determined was not needed, for failing to submit data which the respondent decided could not be a basis for the Department's decision, and for claiming that submitting such information would be ''an unreasonable and unnecessary burden on the company.'' *Id. See also Essar Steel Ltd.* v. *United States,* 721 F. Supp. 2d 1285, 1298–99 (CIT 2010) (stating that ''{r}egardless of whether Essar deemed the license information relevant, it nonetheless should have produced it {in} the event that Commerce reached a different conclusion'' and that ''Commerce, and not Essar, is charged with conducting administrative reviews and weighing all evidence in its calculation of a countervailing duty margin''); *NSK, Ltd.* v. *United States,* 919 F. Supp. 442, 447 (CIT 1996) (''NSK's assertion that the information it submitted to Commerce provided a sufficient representation of NSK's cost of manufacturing misses the point that 'it is Commerce, not the respondent, that determines what information is to be provided for an administrative review.'''); *Nachi-Fujikoshi Corp.* v. *United States,* 890 F. Supp. 1106, 1111 (CIT 1995) (''Respondents have the burden of creating an adequate record to assist Commerce's determinations.'').

[33] *See* section 776(b) of the Act.

[34] *See* December 7, 2011 questionnaire to the GOC at II–10.

[35] *See* the GOC's January 31, 2012 questionnaire response at II–95.

[36] *See* the GOC's March 1, 2012 supplemental questionnaire response at 38.

[37] *See* sections 776(a)(1)–(a)(2)(A) of the Act.

[38] *See* section 776(b) of the Act.

[39] *See* the GOC's January 31, 2012 questionnaire response at II–143.

[40] *See* the GOC's March 1, 2012 supplemental questionnaire response at 42.

the best of its ability to comply with our request for information. The GOC refused to provide necessary information regarding prices paid by Trina Solar. In its first response, quoted above, the GOC appears to be suggesting it cannot obtain information from local governments regarding land transactions. However, such information has been provided in other proceedings,[41] and some information from the local government was, in fact, provided in this investigation; *e.g.,* information concerning one tract of land auctioned to Trina Solar by the Changzhou government, and the GOC's confirmation that all tracts sold to the respondents have been reported. In its second response, the GOC candidly admits the inadequacy of its response when it advises the Department that it ''does not warrant that the information provided below regarding the fifth piece of land is representative for the other pieces of land for Trina.'' Consequently, the GOC has not cooperated to the best of its ability and an adverse inference is warranted in the application of facts available.[42] In drawing an adverse inference, we find that the GOC's provision of land to Trina Solar is specific within the meaning of section 771(5A) of the Act. For details regarding the remainder of our analysis for this program, *see* the ''Provision of Land for LTAR'' section below.

Application of AFA: ''Subsidies Discovered During the Investigation''

In supplemental questionnaires to the respondents and the GOC, we identified a number of grants that the companies appeared to have received based on information from the financial statements and filings with the U.S. Securities and Exchange Commission (SEC) that parties had placed on the record. Respondents had not reported these grants nor did they complete appropriate appendices, despite the Department's request in its initial questionnaire that the respondents should report all subsidies used during the POI, not merely those related to allegations under investigation. In the supplemental questionnaire, we requested that Trina Solar and Wuxi Suntech provide more information about these grants and that the GOC coordinate with the companies to provide information concerning the programs under which these grants were provided, including complete responses to the questions on specificity in our ''standard appendix.'' While both companies provided a listing of their grants and the names of the projects or programs under which they themselves classified these grants, the GOC only confirmed the amounts of the grants reported by one respondent. The GOC did not provide any other information but instead noted: ''The GOC objects to inquiries concerning purported subsidies as to which no timely allegations have been filed, and as to which the Department has not initiated any investigation.'' [43]

The Department, however, has the authority pursuant to section 775 of the Act to examine subsidies discovered during the course of an investigation. Because the GOC has declined to provide information necessary for our analysis of whether these grants are specific, we find that the GOC has withheld information that was requested and has impeded our investigation. Further, the GOC has not cooperated to the best of its ability in responding to our request for information and therefore, we find the use of AFA is warranted in determining the specificity of the grants the respondents reported. Accordingly, as AFA, we are finding all grant programs for these subsidies to be specific (hereinafter, referred to as the ''Discovered Grants'' to distinguish them from other grants provided under programs named in the petition). A list of all Discovered Grants identified publicly by the respondents and found to be used in the POI is included below in the section ''Programs Preliminarily Determined to be Countervailable.'' Most grants provided prior to the POI did not pass the ''0.5 percent test'' provided for in 19 CFR 351.524(b)(2) (discussed below) and, thus, no benefit is allocable to the POI from these grants. A list of the grants provided prior to the POI that can be identified publicly is included below in the section ''Programs Preliminarily Determined to be Not Used By Respondents.'' Because the names of some of the grants were bracketed by the respondents, a full list of the Discovered Grants can only be found in the business-proprietary Preliminary Calculations Memoranda.[44]

Subsidies Valuation Information

Period of Investigation

The POI for which we are measuring subsidies is January 1, 2010, through December 31, 2010.[45]

Allocation Period

The Department normally allocates the benefits from non-recurring subsidies over the average useful life (AUL) of renewable physical assets used in the production of subject merchandise. The Department finds the AUL in this proceeding to be 10 years, pursuant to 19 CFR 351.524(d)(2) and the U.S. Internal Revenue Service's 1977 Class Life Asset Depreciation Range System.[46] The Department notified the respondents of the 10-year AUL in the initial questionnaire and requested data accordingly.[47] No party in this proceeding has disputed this allocation period.

Furthermore, for non-recurring subsidies, we have applied the ''0.5 percent test,'' as described in 19 CFR 351.524(b)(2). Under this test, we divide the amount of subsidies approved under a given program in a particular year by the relevant sales value (*e.g.,* total sales or export sales) for the same year. If the amount of the subsidies is less than 0.5 percent of the relevant sales value, then the benefits are allocated to the year of receipt rather than across the AUL.

Attribution of Subsidies

In accordance with 19 CFR 351.525(b)(6)(i), the Department normally attributes a subsidy to the products produced by the company that received the subsidy. However, 19 CFR 351.525(b)(6)(ii)-(v) provides additional rules for the attribution of subsidies received by respondents with cross-owned affiliates. Subsidies to the following types of cross-owned affiliates

[41] *See, e.g.,* Additional Documents Memorandum at Attachment V (includes a public version of a memorandum describing a discussion with county officials of respondent's land transaction as well as the transactions of several other nearby companies that were not even respondents in the proceeding; *e.g.,* ''We asked for and were provided * * * land contracts as well as the accompanying agreements for several companies located in the New Century Industrial Park.'').

[42] *See* section 776(b) of the Act.

[43] *See* GOC's March 1, 2012 supplemental questionnaire response at 55.

[44] Memorandum to Mark Hoadley, Program Manager, ''Preliminary Affirmative Countervailing Duty Determination: Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, from the People's Republic of China; Preliminary Determination Calculations for Wuxi Suntech Power Co., Ltd.,'' March 19, 2012, and Memorandum to Mark Hoadley, Program Manager, ''Preliminary Affirmative Countervailing Duty Determination: Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, from the People's Republic of China; Preliminary Determination Calculations for Changzhou Trina Solar Energy Co., Ltd.,'' March 19, 2012 (collectively, Preliminary Calculations Memoranda).

[45] *See* 19 CFR 351.204(b)(2).

[46] *See* U.S. Internal Revenue Service Publication 946 (2008), ''How to Depreciate Property,'' at Table B–2: Table of Class Lives and Recovery Periods.

[47] As discussed above and in accordance with the Department's practice, regardless of the AUL chosen, we will not countervail subsidies conferred before December 11, 2011, the date of the PRC's accession to the WTO. *See, e.g., Certain Magnesia Carbon Bricks From the People's Republic of China: Final Affirmative Countervailing Duty Determination,* 75 FR 45472 (August 2, 2010), and accompanying Issues and Decision Memorandum at ''Subsidies Valuation Information.''

are covered in these additional attribution rules: (ii) Producers of the subject merchandise; (iii) holding companies or parent companies; (iv) producers of an input that is primarily dedicated to the production of the subject merchandise; or (v) an affiliate producing non-subject merchandise that otherwise transfers a subsidy to a respondent.

Cross-Ownership

According to 19 CFR 351.525(b)(6)(vi), cross-ownership exists between two or more corporations where one corporation can use or direct the individual assets of another corporation in essentially the same ways it can use its own assets. This standard will normally be met where there is a majority voting interest between two corporations, or through common ownership of two (or more) corporations. The Court of International Trade (CIT) has upheld the Department's authority to attribute subsidies based on whether a company could use or direct the subsidy benefits of another company in essentially the same ways it could use its own subsidy benefits.[48]

Based on information on the record, we preliminarily determine that cross-ownership exists, in accordance with 19 CFR 351.525(b)(6)(vi), among the following companies.

1. The Trina Solar Companies

As discussed above, we selected Changzhou Trina Solar Energy Co., Ltd. (*i.e.,* Trina Solar) as a mandatory respondent. Trina Solar reported that it is affiliated with Trina Solar (Changzhou) Science and Technology Co., Ltd. (TST), which is a producer of subject merchandise located in the PRC. Since both companies produce subject merchandise, Trina Solar and TST responded collectively to the Department's questionnaires. In the questionnaire responses, these companies stated that they have the same board of directors and chairman. Both Trina Solar and TST are ultimately owned by Trina Solar Limited (TSL), a company located in the Cayman Islands that is publicly traded on the New York Stock Exchange.[49] Trina Solar and TST have reported that the CEO of TSL is also their shared board chairman. Therefore, pursuant to 19 CFR 351.525(b)(6)(vi), we preliminarily determine that Trina Solar and TST are cross-owned.[50] Trina Solar has reported that both it and TST are affiliated with numerous companies.[51] While Trina Solar has stated that, for various reasons, none of these affiliates are required to provide questionnaire responses under the Department's attribution and cross-ownership regulations, we will be seeking further information and will be examining the relationship between and among Trina Solar, TST, and its affiliated companies during the course of this investigation. Because both Trina Solar and TST are producers of subject merchandise, we are attributing any subsidy received by either company to the combined sales of both companies, excluding intercompany sales. Hereinafter, we refer to Trina Solar and TST collectively as Trina Solar, unless otherwise indicated.

2. The Wuxi Suntech Companies

Wuxi Suntech has responded to the Department's original and supplemental questionnaires on behalf of itself and five cross-owned affiliates: Luoyang Suntech Power Co., Ltd. (Luoyang Suntech), Suntech Power Co., Ltd. (Shanghai Suntech), Yangzhou Rietech Renewal Energy Co., Ltd. (Yangzhou Rietech), Zhenjiang Huantai Silicon Science & Technology Co., Ltd. (Zhenjiang Huantai), and Kuttler Automation Systems (Suzhou) Co., Ltd. (Suzhou Kuttler). In its annual Form 20–F SEC filing for the year ending December 31, 2010,[52] Suntech Power Holdings Co., Ltd. (Suntech Holdings), the holding company registered in the Cayman Islands and listed on the New York Stock Exchange, reported that it owns the majority (*i.e.,* wholly owns or owns more than 50 percent) of the shares of Wuxi Suntech, Luoyang Suntech, Shanghai Suntech, Yangzhou Rietech, Zhenjiang Huantai and Suzhou Kuttler. As all these companies have common ownership through Suntech Holdings, we preliminarily determine that Wuxi Suntech, Luoyang Suntech, Shanghai Suntech, Yangzhou Rietech, Zhenjiang Huantai and Suzhou Kuttler are cross-owned within the meaning of 19 CFR 351.525(b)(6)(vi). Wuxi Suntech has reported that it is affiliated with numerous companies. While Wuxi Suntech has stated that, for various reasons, none of these affiliates are required to provide questionnaire responses under the Department's attribution and cross-ownership regulations, we will be seeking further information and will be examining the relationship between and among these various affiliated companies during the course of this investigation.[53]

Wuxi Suntech, Luoyang Suntech, and Shanghai Suntech are producers of subject merchandise. Accordingly, we are attributing subsidies received by Wuxi Suntech, Luoyang Suntech, and Shanghai Suntech to the combined sales of the three companies, excluding inter-company sales, in accordance with 19 CFR 351.525(b)(6)(ii). Yangzhou Rietech, Zhenjiang Huantai and Suzhou Kuttler provide either inputs or equipment for the production of subject merchandise. With regard to the inputs, we preliminarily determine that these inputs are primarily dedicated to the production of solar cells in accordance with 19 CFR 351.524(b)(6)(iv).[54] Therefore, we are attributing subsidies received by each of these three companies to the combined sales of the company itself and the three producers of subject merchandise discussed above, excluding inter-company sales, in accordance with 19 CFR 351.525(b)(6)(iv).

Hereinafter, we refer to Wuxi Suntech, Luoyang Suntech, Shanghai Suntech, Yangzhou Rietech, Zhenjiang Huantai, and Suzhou Kuttler collectively as Wuxi Suntech, unless otherwise indicated.

Denominators

When selecting an appropriate denominator for use in calculating the *ad valorem* subsidy rate, the Department considers the basis for the respondent's receipt of benefits under each program. As discussed in further detail below in the ''Programs Preliminarily Determined to be Countervailable'' section, where the program has been found to be an export subsidy, we used the recipient's total export sales as the denominator (or the total combined export sales of the cross-owned affiliates, as described above). Where the program has been found to be countervailable as a domestic subsidy, we used the recipient's total sales as the denominator (or the total combined sales of the cross-owned affiliates, as described above). For a further discussion of the denominators used,

[48] *See Fabrique de Fer de Charleroi* v. *United States,* 166 F. Supp 2d 593, 600–604 (CIT 2001).

[49] *See* Trina Solar's January 31, 2012 questionnaire response at III–2.

[50] The Department's regulations at 19 CFR 351.525(b)(6)(vi) state that cross-ownership exists when one corporation can use or direct the assets of another corporation in essentially the same way it can use its own. Normally, however, ''this standard will be met where there is a majority voting ownership interest between two corporations or through common ownership of two (or more) corporations.''

[51] *See, e.g.,* Trina Solar's January 31, 2012 questionnaire response at Exhibits 1 and 2.

[52] *See* Wuxi Suntech's January 31, 2012 questionnaire response at Exhibit 10.

[53] *See* ''Programs for Which Additional Information is Required,'' below.

[54] *See* Preliminary Calculations Memoranda.

see the Preliminary Calculations Memoranda.

Discount Rates for Allocating Non-Recurring Subsidies

Consistent with 19 CFR 351.524(d)(3)(i)(C) and the Department's practice over multiple PRC CVD investigations, we have used as our discount rates the long-term interest rate benchmarks calculated according to the methodology described below for the years in which the government provided non-recurring subsidies.

Interest Rate Benchmarks

1. Short-Term Interest Rate Benchmark

Section 771(5)(E)(ii) of the Act explains that the benefit for loans is the ''difference between the amount the recipient of the loan pays on the loan and the amount the recipient would pay on a comparable commercial loan that the recipient could actually obtain on the market,'' indicating that a benchmark must be a market-based rate. Normally, the Department uses comparable commercial loans reported by the company for benchmarking purposes.[55] If the firm does not receive any comparable commercial loans during the relevant periods, the Department's regulations provide that we ''may use a national average interest rate for comparable commercial loans.''[56] The Department, however, has determined that loans provided by Chinese banks reflect significant government intervention in the banking sector, and do not reflect rates that would be found in a functioning market.[57] Therefore, the benchmarks that are described under 19 CFR 351.505(a)(3) are not appropriate options. The Department is, therefore, using an external, market-based benchmark interest rate.

In past proceedings involving imports from the PRC, we calculated the external benchmark using the methodology first developed in *CFS from the PRC*[58] and more recently updated in *LWTP from the PRC.*[59] Under that methodology, we first determine which countries are similar to the PRC in terms of gross national income (GNI), based on the World Bank's classification of countries as: Low income; lower-middle income; upper-middle income; and high income. As explained in *CFS from the PRC,* this pool of countries captures the broad inverse relationship between income and interest rates. For 2001 through 2009, the PRC fell in the lower-middle income category.[60] Beginning in 2010, however, the PRC is in the upper-middle income category. Accordingly, as explained further below, we are using the interest rates of upper-middle income countries to construct the 2010 benchmark.

After identifying the appropriate interest rates, the next step in constructing the benchmark has been to incorporate an important factor in interest rate formation, the strength of governance. These indicators measure the quality of the countries' institutions and they have been built into the analysis by using a regression analysis that relates the interest rates to the governance indicators. In each of the years from 2001–2009, the results of the regression analysis reflected the intended, common sense result: stronger institutions meant relatively lower interest rates, while weaker institutions meant relatively higher interest rates. For 2010, however, the regression does not yield that outcome for the PRC's income group.

This contrary result for a single year in ten does not lead us to reject the strength of governance as a determinant of interest rates. As confirmed by the Federal Reserve, ''there is a significant negative correlation between institutional quality and the real interest rate, such that higher quality institutions are associated with lower real interest rates.'' [61] However, for 2010, incorporating the governance indicators in our analysis does not make for a better benchmark. Therefore, while we have continued to rely on the regression-based analysis used since *CFS from the PRC* to compute the benchmarks for loans taken out prior to the POI, for the 2010 benchmark we are using an average of the interest rates of the upper-middle income countries. Based on our experience for the 2001–2009 period, in which the average interest rate of the lower-middle income group did not differ significantly from the benchmark rate resulting from the regression for that group, use of the average interest rate for 2010 does not introduce a distortion into our calculations.

With the following exceptions, we have used the interest and inflation rates reported in the International Financial Statistics (IFS), collected by the International Monetary Fund, for the countries identified as ''upper middle income'' by the World Bank for 2010 and ''lower-middle income'' for 2001–2009.[62] First, we did not include those economies that the Department considered to be NMEs for antidumping purposes during any part of the years in question, for example: Armenia, Azerbaijan, Belarus, Georgia, Moldova, and Turkmenistan. Second, the pool necessarily excludes any country that did not report lending and inflation rates to the IFS for those years. Third, we removed any country that reported a rate that was not a lending rate or that based its lending rate on foreign-currency denominated instruments. For example, if a country reports a deposit rate, not a lending rate, or reports dollar-denominated rates, not rates in its local currency, the rate for such a country has been excluded. Finally, for each year for which the Department calculated a benchmark rate, we have also excluded any countries with aberrational or negative real interest rates for the year in question.[63] Because the resulting interest rate benchmarks are net of inflation, we adjusted the benchmarks to include an inflation component.

For loans denominated in U.S. dollars, we are again following the methodology developed over a number of successive PRC investigations. Specifically, for U.S. dollar loans, the Department used as a benchmark the one-year dollar London Interbank Offering Rate (LIBOR), plus the average spread between LIBOR and the one-year corporate bond rates for companies with a BB rating. Likewise, for loans denominated in other foreign currencies, we used as a benchmark the one-year LIBOR for the given currency plus the average spread between the LIBOR rate and the one-year corporate bond rate for companies with a BB rating.

[55] 19 CFR 351.505(a)(3)(i).

[56] 19 CFR 351.505(a)(3)(ii).

[57] *See* CFS from the PRC Decision Memorandum at Comment 10.

[58] *Id.*

[59] *See Lightweight Thermal Paper From the People's Republic of China: Final Affirmative Countervailing Duty Determination,* 73 FR 57323 (October 2, 2008) (*LWTP from the PRC*), and accompanying Issues and Decision Memorandum (LWTP from the PRC Decision Memorandum) at 8–10.

[60] *See* The World Bank Country Classification, http://econ.worldbank.org/.

[61] *See* Additional Documents Memorandum at Attachment I (a Department memorandum entitled ''Consultations with Government Agencies'').

[62] As discussed below, short-term loan benchmarks are the basis for long-term loan benchmarks. Therefore, we calculated short-term loan benchmarks for several years other than those in which short-terms loans were provided that were outstanding in the POI.

[63] Because we are countervailing loans provided in a number of years, for the exact details regarding the countries excluded in each year, *see* Memorandum regarding ''Preliminary Affirmative Countervailing Duty Determination: Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, from the People's Republic of China—Preliminary Benchmark Memorandum,'' March 19, 2012 (Preliminary Benchmark Memorandum).

2. Long-Term Interest Rate

The lending rates reported in the IFS represent short-term and medium-term lending, and there are not sufficient, publicly available long-term interest rate data upon which to base a robust benchmark for long-term loans. To address this problem, the Department previously developed an adjustment to the short-term rates described above to convert them to long-term rates using BB-rated corporate bond rates.[64] In subsequent CVD investigations, this long-term conversion markup was revised to equal the difference between the two-year BB bond rate and the n-year BB bond rate, where ''n'' equals or approximates the number of years of the term of the loan in question.[65] The resulting inflation-adjusted lending rates, which we are also using as discount rates, are provided in the Preliminary Benchmark Memorandum.[66] We continue to use the same methodology for this case.

Land Benchmark

Section 351.511(a)(2) of the Department's regulations sets forth the basis for identifying comparative benchmarks for determining whether a government good or service is provided for LTAR. These potential benchmarks are listed in hierarchical order by preference: (1) Market prices from actual transactions within the country under investigation; (2) world market prices that would be available to purchasers in the country under investigation; or (3) an assessment of whether the government price is consistent with market principles. As explained in detail in previous investigations, the Department cannot rely on the use of so called ''first-tier'' and ''second-tier'' benchmarks to assess the benefits from the provision of land for LTAR in the PRC.[67]

Consistent with the prior determinations, we have preliminarily determined that measuring the extent by which land is provided for LTAR is best achieved by comparing prices for land-use rights in the PRC with comparable market-based prices in a country at a comparable level of economic development that is within the geographic vicinity of the PRC. In previous PRC investigations,[68] we concluded that the most appropriate benchmark for the respondents' land-use rights were sales of certain industrial land plots in industrial estates, parks, and zones in Thailand. We relied on prices from a real estate market report on Asian industrial property that was prepared outside the context of any Department proceeding by an independent and internationally recognized real estate agency with a long-established presence in Asia. In relying on a land benchmark from Thailand, we noted that the PRC and Thailand had similar levels of per capita GNI and that population density in the PRC and Thailand are roughly comparable. Additionally, we noted that producers consider a number of markets, including Thailand, as options for diversifying production bases in Asia beyond the PRC. Therefore, we concluded, the same producers may compare prices across borders when deciding what land to buy. We cited to a number of sources which named Thailand as an alternative production base to the PRC.[69]

For this investigation, we have obtained updated data from the same independent and internationally recognized real estate agency for all four quarters of 2010. These are updated versions of the same reports, relied on in the prior determinations, which include industrial land values for plots in industrial estates, parks, and zones in Thailand, the Philippines, and other Asian countries. We are placing all four of the *Asian Marketview* reports, which are publicly available on the Internet, on the record of this investigation.[70] In evaluating which of these locations is most appropriate to use as the source of the benchmark, we have focused on Thailand, consistent with the prior determinations.

Based on our analysis, we preliminarily determine that a simple average of all land values for industrial property in Thailand provides the closest match, among options on the record, to the PRC in terms of per capita GNI and population density. The per capita GNI of Thailand is $3,760, compared to $3,590 for the PRC, while the per capita GNI for the Philippines is $2,840.[71] (*Asian Marketview* includes data for other Asian nations, but all have either higher incomes or are considered NMEs by the Department; *e.g.,* Singapore and Vietnam.) For 2010, Thailand is also a closer match in terms of population density with 135 people per square kilometer (psk) compared to the PRC's 140 people psk (the Philippines has a population density of 311 psk).[72] The calculated average of the rates for Thailand is $8.21 per square foot.[73] As explained in the Preliminary Benchmark Memorandum, the Department is deflating this value to calculate the benchmark for any land that may have been purchased in 2008 and 2009.

We are continuing to use the 2007 benchmark calculated in the investigations of laminated woven sacks and new pneumatic off-the-road tires cited above as the land benchmark for any land that may have been purchased in 2007 or earlier years. As mentioned, this benchmark was calculated using the same source, *Asian Marketview,*[74] discussed above, and also is a simple average of industrial land values reported in *Asian Marketview* for Thailand. The analysis relied upon in determining that this figure was the most appropriate benchmark for PRC land-use rights in 2007 can be found in those prior determinations.[75]

Polysilicon Benchmark

We have selected the benchmark for measuring the adequacy of the remuneration for polysilicon in accordance with 19 CFR 351.511(a)(2). In its supplemental questionnaire response, the GOC confirmed that there were 47 producers in the PRC of polysilicon during the POI, but the GOC did not provide the production volume

[64] *See, e.g., Light-Walled Rectangular Pipe and Tube From the People's Republic of China: Final Affirmative Countervailing Duty Investigation Determination,* 73 FR 35642 (June 24, 2008) and accompanying Issues and Decision Memorandum at 8.

[65] *See Citric Acid and Certain Citrate Sales From the People's Republic of China: Final Affirmative Countervailing Duty Determination,* 74 FR 16836 (April 13, 2009) and accompanying Issues and Decision Memorandum at Comment 14.

[66] *See* Preliminary Benchmark Memorandum at Attachment 12.

[67] *See, e.g., Laminated Woven Sacks From the People's Republic of China: Preliminary Affirmative Countervailing Duty Determination; Preliminary Affirmative Determination of Critical Circumstances, In Part; and Alignment of Final Countervailing Duty Determination With Final Antidumping Duty Determination,* 72 FR 67893, 67906–08 (December 3, 2007) (*LWS Preliminary Determination*), unchanged in *Laminated Woven Sacks From the People's Republic of China: Final Affirmative Countervailing Duty Determination and Final Affirmative Determination, in Part, of Critical Circumstances,* 73 FR 35639 (June 24, 2008).

[68] *See LWS Preliminary Determination,* 72 FR at 67909.

[69] *See Certain New Pneumatic Off-the-Road Tires from the People's Republic of China: Preliminary Affirmative Countervailing Duty Determination,* 72 FR 71360, 71368 (December 17, 2007).

[70] *See* Preliminary Benchmark Memorandum at Attachment 5.

[71] All GNI figures are from the World Development Report 2011, published by the World Bank.

[72] *See* Additional Documents Memorandum at Attachment II (which includes relevant sections of the United Nation's *World Population Prospects: The 2010 Revision*).

[73] *See* Preliminary Benchmark Memorandum at Attachment 7.

[74] The report, published by CB Richard Ellis, is currently entitled *Asian Marketview,* but older versions were entitled *Asian Marketwatch.*

[75] *See, e.g., LWS Preliminary Determination,* 72 FR at 67909.

for any of these polysilicon producers, claiming it was prohibited from providing such information.[76] The GOC provided the names of nine polysilicon producers in which it maintains an ownership or management interest according to the National Bureau of Statistics of the GOC.[77] The mandatory respondents purchased polysilicon from 30 polysilicon producers during the POI, two of which were included in the list of producers in which the GOC maintains an ownership or management interest.[78]

As explained in the ''Application of AFA: Polysilicon Producers are 'Authorities''' section above, the Department has preliminarily determined that all the producers of polysilicon purchased by the respondents during the POI are ''authorities'' within the meaning of section 771(5)(B) of the Act. Because the GOC did not provide the production volumes for any of the polysilicon producers in the PRC, the Department cannot determine, on the basis of production volumes, what percentage of total domestic production or total domestic consumption is accounted for by the producers determined to be ''authorities.''[79] Therefore, we have determined whether polysilicon consumption in the PRC is dominated by the GOC based on the number of producers that are ''authorities.'' In addition to the 30 producers determined to be ''authorities,'' the GOC reports it maintains an ownership or management interest in another seven,[80] bringing to 37 the number of producers through which the GOC influences and distorts the domestic market for polysilicon, out of a total universe of 47 producers in the PRC.

Therefore, we determine that the GOC is the predominant provider of polysilicon in the PRC and that its significant presence in the market distorts all transaction prices. As such, we cannot rely on domestic prices in the PRC as a ''tier-one'' benchmark. For the same reasons, we determine that import prices into the PRC cannot serve as a benchmark. Turning to tier-two benchmarks, *i.e.,* world market prices available to purchasers in the PRC, pursuant to 19 CFR 351.511(a)(2)(ii), Petitioner submitted monthly world market prices for polysilicon.[81] Based on our review of the data, we are preliminarily relying on these world market prices, from Photon Consulting ''Silicon Price Index,'' as a benchmark price for polysilicon.

We note that Petitioner submitted alternative polysilicon benchmark data in its pre-preliminary determination comments. It argued that these data were more appropriate because they represent values for long-term contracts in 2008, which might cover shipments in 2010, according to the SEC filings of Trina Solar. Trina Solar's SEC filings, however, state that it purchased polysilicon in 2007 and 2008 ''through a combination of multi-year supply agreements, short-term supply arrangements and spot market purchases.''[82] In addition, the Web site for Photon Consulting states that its ''Silicon Price Index'' is a ''weighted index in which silicon prices reported by each survey participant are weighted to reflect the nuances found in the length of reported silicon contracts, prepayments and price digression.''[83] Therefore, it appears that the Photon Consulting price index is the most appropriate match to Trina Solar's purchases.[84] We intend, however, to gather information concerning the exact structure of the respondents' purchases of polysilicon to evaluate whether their purchase terms indicate that the use of a different benchmark is more appropriate.

Terminated Programs

The GOC reported that six programs used by the respondents have been terminated. However, the GOC did not request a program wide change adjustment to the cash deposit rate under 19 CFR 351.526(a), nor did it provide all of the documentation necessary to conduct such an evaluation. In addition, several of the programs the GOC claims were terminated have residual benefits in the POI. For example, certain parties continue to enjoy benefits from the ''Two Free, Three Half'' income tax program for Foreign Invested Enterprises (FIEs). Therefore, we are not making any adjustments to the cash deposit rates in this preliminary determination for terminated programs.

Analysis of Programs

Based upon our analysis of the petition, the responses to our questionnaires, and other information on the record, we preliminarily determine the following.

I. *Programs Preliminarily Determined To Be Countervailable*

A. Golden Sun Demonstration Program

The Golden Sun Demonstration Program (Golden Sun program) is a combination of financial assistance, technological support, and market approaches developed to accelerate the industrialization and development of the PRC's domestic photovoltaic power industry and to promote the progress of photovoltaic power generation. According to the GOC, the central government has allocated renewable energy funds to support the implementation of the Golden Sun program under Article 20 of the GOC's ''Renewable Energy Law.'' As detailed in the ''Notice concerning the Implementation of the Golden Sun Demonstration Project,'' (CaiJian {2009} No. 397), the program was established in 2009, and was designed to provide one-time assistance to recipients over the course of its two-year term.

The GOC states that the Golden Sun program was created to assist constructive investment in photovoltaic electricity-generation projects, with the goal of narrowing the gap between the costs of photovoltaic electricity generation and the costs of fossil fuel electricity generation. Financial assistance through this program includes support for, *inter alia,* the following: (1) The use of large-scale mining, commercial enterprises, and public welfare institutions to construct the user's side of the electrical grid for photovoltaic power generation demonstration projects; (2) increasing the power supply capacity in remote locations; and (3) construction of large-scale grid-connected photovoltaic power generation demonstration projects in solar energy rich regions.

To be eligible for financial support for this program, the GOC states that projects must: (1) Be included in the Golden Sun program within the local geographic region; (2) have an installed capacity of not less than 300 kWh; (3) have a construction period of not more than one year, and an operation period

[76] *See* the GOC's March 1, 2012 supplemental questionnaire response at 36.

[77] *See* the GOC's January 31, 2012 questionnaire response at II–91.

[78] *See* Trina Solar's January 31, 2012 questionnaire response at Exhibit 27; Wuxi Suntech's January 31, 2012 questionnaire response at Exhibit S–17; Zhenjiang Huantai's February 27, 2012 questionnaire response at Exhibit S–19; and Yangzhou Rietech's January 31, 2012 questionnaire response at Exhibit 5.

[79] *See* section 776(b) of the Act.

[80] The GOC reported that it maintains an ownership or management interest in nine producers. However, two of these companies were among the 30 already analyzed above.

[81] *See* October 19, 2011 CVD Petition at 40, Exhibit 154.

[82] *See* Trina Solar's February 27, 2012 supplemental questionnaire response at Exhibit 16–18.

[83] *See* Preliminary Benchmark Memorandum at Attachment 2.

[84] There appears to be no information on the record indicating whether Suntech purchases polysilicon through short-term or long-term contracts, the spot market, or a mixture of one or more of these.

of not less than 20 years; (4) the total assets of the owner hosting the project must not be less than 100 million Yuan, and its capital must not be less than 30 percent of the total investment; and (5) the photovoltaic project must be technologically advanced, and the project's host must be able to operate and protect the project. Project applications are then reviewed by the GOC's Ministry of Finance, Ministry of Science, and the National Energy Board. According to the GOC, grid-connected photovoltaic power generation projects can receive up to 50 percent of their total investment from the GOC. For independent photovoltaic power generation systems located in distant areas without an established electrical grid, project operators can receive up to 70 percent of their total investment from the GOC.

To receive funding under this program, the GOC states that an operator of an eligible project must complete any preparation work beforehand, which includes inviting bids for necessary equipment, finalizing plans for the project's construction, and submitting application documents to the GOC. Once these documents are approved by the GOC, the Ministry of Finance will allocate the funds to the project's operator.

Wuxi Suntech reported that it did not participate in this program in 2009 (the year this program was established) or during the POI. Trina Solar, however, reported that it received a grant during the POI from the Jiangsu Reform and Development Committee for installing a photovoltaic energy-generating project.[85] We preliminarily determine that the grant received by Trina Solar through the Golden Sun program confers a countervailable subsidy. The grant is a financial contribution pursuant to section 771(5)(D)(i) of the Act and provides a benefit in the amount of the grant provided, pursuant to 19 CFR 351.504(a). We find that grants from this program are specific as a matter of law to certain enterprises, namely those involved in the construction of solar-powered projects, pursuant to section 771(5A)(D)(i) of the Act. In its March 1, 2012 supplemental questionnaire, the GOC contends that the Golden Sun program is similar to several programs alleged in the CVD petition for wind towers from the PRC that the Department determined not to investigate. According to the GOC, the Department determined the benefit element of a subsidy had not been demonstrated, despite the petition's allegation that wind tower producers benefitted through an increase in demand caused by the GOC's financial assistance to the operators of wind tower projects.[86] Thus, the GOC contends that the Department should discontinue its investigation of the Golden Sun program because it does not benefit Chinese producers of solar cells, only those involved in the construction of solar power projects.[87] However, in the instant investigation, it is not necessary to address this argument as Trina Solar benefitted directly from the program as the recipient of the grant.

In accordance with 19 CFR 351.504(c)(1) and 19 CFR 351.524(b)(2), we have treated the grant as a non-recurring subsidy and performed the ''0.5 percent test'' for the year the grant was provided to Trina Solar. Specifically, we divided the total amount of the grant by the appropriate total sales denominator, as discussed in the ''Subsidies Valuation Information'' section above, and in the Preliminary Calculations Memoranda. Because the resulting percentage was less than 0.5 percent, we have expensed the full amount of the grant in the POI. To determine Trina Solar's subsidy rate from the grant, we divided the benefit expensed in the POI by the appropriate total sales denominator, as discussed in the ''Subsidies Valuation Information'' section above, and in the Preliminary Calculations Memoranda. On this basis, we preliminarily determine a countervailable subsidy rate of 0.09 percent *ad valorem* for Trina Solar.

B. Preferential Policy Lending

Petitioner alleged that the GOC subsidizes solar cells producers through the provision of policy loans. According to Petitioner, the GOC provides for preferential policy lending to solar cells producers through the Renewable Energy Law, the Medium- and Long-Term Development Plan for Renewable Energy in China, the ''Interim Measures for the Administration of Financial Subsidy Fund for Renewable and Energy Saving-Building Materials,'' and a ''multitude of other Chinese central government programs and measures, notably including the PRC's Twelfth Five-Year Plan.''

Both respondents reported having loans outstanding during the POI. The Department finds that the loans to both respondents are countervailable. The information on the record indicates the GOC has placed great emphasis on targeting the renewable energy industry, including solar cells producers, for development in recent years.[88] The Renewable Energy Law, in Article 25, calls specifically for the use of loans in implementing the GOC's plans for renewable energy: ''Financial institutions may offer favorable loans with a financial discount for renewable energy development and utilization projects that are listed in the renewable energy industry development guidance catalogue and meet credit requirements.'' The catalogue referenced in the Renewable Energy Law includes an entire section for solar power projects. Among those projects, most, if not all, of which would require the use of solar cells, are three projects specifically for the production of solar cells, including subject merchandise: ''Single crystal silicon solar energy cell and multi-crystal silicon solar energy cell'' (project 39). As Petitioner notes, the Renewable Energy Law is noted by Trina Solar in its 2010 SEC filing (form 20–F). On page 49 of its SEC filing, Trina Solar notes that the law ''provides financial incentives, such as national funding, preferential loans and tax preferences for the development of renewable energy projects.''

Renewable energy is also among the projects listed in the ''Directory Catalogue on Readjustment of Industrial Structure'' of the National Development and Reform Commission (NDRC) (Catalogue No. 40), which contains a list of encouraged projects the GOC develops through loans and other forms of assistance,[89] and which the Department has relied upon in prior specificity determinations. Catalogue

[85] Besides this single grant, other grants have been approved for respondents but none resulted in disbursements during the POI.

[86] *See Utility Scale Wind Towers From the People's Republic of China: Initiation of Countervailing Duty Investigation,* 77 FR 3447 (January 24, 2012), and accompanying Initiation Checklist at 38–39; *see also* the GOC's March 1, 2012 supplemental questionnaire response at 3.

[87] *See* the GOC's March 1, 2012 supplemental questionnaire response at 4.

[88] In addition to the documents noted by Petitioner, referred to above, concern with the solar cells industry is demonstrated in the National Medium- and Long-Term Program for Science and Technology Development (the GOC's January 31, 2012 questionnaire response at Exhibit O–II–A–6–b) and the Interim Measures for Special Fund Management for the Development of Renewable Energies (the GOC's January 31, 2012 questionnaire response at Exhibit O–II–A–6–d), and specific projects undertaken pursuant to these plans, laws, and measures, such as the Golden Sun program (O–II–A–6–h). This concern has culminated in the recently issued five-year plan for the Solar Cells Industry (for the 12th planning period, beginning after the end of the POI), the first five-year plan issued for this industry.

[89] *See, e.g., Certain New Pneumatic Off-the-Road Tires From the People's Republic of China: Final Affirmative Countervailing Duty Determination and Final Negative Determination of Critical Circumstances,* 73 FR 40480 (July 15, 2008) (*Tires Final Determination*) and accompanying Issues and Decision Memorandum at ''Government Policy Lending'' section.

No. 40 includes an encouraged project (number IV(5)) for: ''Development and utilization of wind energy power to generate electricity and such renewable resources as solar energy, geothermal energy, ocean energy, biomass energy and etc.'' [90]

Therefore, given the evidence demonstrating the GOC's objective of developing the renewable energy sector, and solar cells producers in particular, through loans and other financial incentives, we preliminarily determine there is a program of preferential policy lending specific to solar cells producers, within the meaning of section 771(5A)(D)(i) of the Act. We also preliminarily find that loans from state owned commercial banks (SOCBs) under this program constitute financial contributions, pursuant to sections 771(5)(B)(i) and 771(5)(D)(i) of the Act, because SOCBs are ''authorities.'' [91] The loans provide a benefit equal to the difference between what the recipients paid on their loans and the amount they would have paid on comparable commercial loans.[92] To calculate the benefit from this program, we have used the benchmarks discussed above under the ''Subsidy Valuation Information'' section.[93] On this basis, we preliminarily determine a subsidy rate of 0.84 percent *ad valorem* for Trina Solar and 1.23 percent *ad valorem* for Wuxi Suntech.

C. Provision of Polysilicon for LTAR

Petitioners have alleged that the respondents received countervailable subsidies in the form of the provision of polysilicon for LTAR. For the reasons explained in the ''Use of Facts Otherwise Available and Adverse Inferences'' section above, we are basing our determination regarding the government's provision of polysilicon, in part, on AFA. Specifically, we have determined as AFA that the producers of the polysilicon purchased by both respondents are ''authorities'' within the meaning of section 771(5)(B) of the Act and, as such, the provision of polysilicon constitutes a financial contribution under section 771(5)(D)(iii) of the Act. Further, we have determined as AFA that the provision of polysilicon at LTAR is specific to solar cells producers. Lastly, a benefit is being conferred because the polysilicon is being provided for LTAR, as explained below.

As discussed above under the ''Subsidies Valuation Information'' section, the Department is selecting for polysilicon benchmarks contemporaneous monthly world market prices from Photon Consulting's ''Silicon Price Index.'' This information was placed on the record of this investigation in the petition. The Department has adjusted the benchmark price to include delivery charges, import duties, and value added tax (VAT) pursuant to 19 CFR 351(a)(2)(iv).[94] Regarding delivery charges, we have included ocean freight and the inland freight charges that would be incurred to deliver polysilicon to respondents' production facilities. We have added import duties as reported by the GOC, and the VAT applicable to imports of polysilicon into the PRC, also as reported by the GOC.[95] In calculating VAT, we applied the applicable VAT rate to the benchmark after first adding amounts for ocean freight and import duties. We have compared these monthly benchmark prices to the respondents' reported purchase prices for individual transactions, including VAT and delivery charges.

Based on this comparison, we preliminarily determine that polysilicon was provided for LTAR and that a benefit exists for each respondent in the amount of difference between the benchmark prices and the prices each respondent paid.[96] We divided the total benefits for each respondent by the appropriate total sales denominator, as discussed in the ''Subsidies Valuation Information'' section above, and in the Preliminary Calculations Memoranda. On this basis, we preliminarily determine a countervailable subsidy rate of 1.07 percent *ad valorem* for Trina Solar and 0.35 percent *ad valorem* for Wuxi Suntech.

D. Provision of Land for LTAR

Petitioner has alleged that Trina Solar and Wuxi Suntech benefited from the provision of land to solar cells producers by the GOC at either a discounted rate or for free. The sale of land-use rights constitutes a financial contribution from a government authority in the form of providing goods or services pursuant to section 771(5)(D)(iii) of the Act. As discussed above in the ''Application of AFA: Land Provided to Trina Solar is Specific to the Solar Cells Industry'' section, the Department has preliminarily determined as AFA that the provision of land to Trina Solar was specific.

In order to calculate the benefit, we first multiplied the Thailand industrial land benchmarks discussed above under the ''Land Benchmark'' section, by the total area of Trina Solar's countervailed tracts. As noted above, we have benchmarks for 2007 and 2010. For other years in which land was provided, we deflated either the 2007 or 2010 figure, depending on which was closer in time to the year of the relevant land-use agreement. We then subtracted the price actually paid for each tract to derive the total unallocated benefit. We next conducted the ''0.5 percent test'' of 19 CFR 351.524(b)(2) for the year of the relevant land-use agreement by dividing the total unallocated benefit for each tract by the appropriate sales denominator. If more than one tract was provided in a single year, we combined the total unallocated benefits from the tracts before conducting the ''0.5 percent test.'' As a result, we found that the benefits were greater than 0.5 percent of relevant sales and that allocation was appropriate for all tracts. We allocated the total unallocated benefit amounts across the terms of the land-use agreements, using the standard allocation formula of 19 CFR 351.524(d), and determined the amount attributable to the POI. We then summed all of the benefits attributable to the POI and divided this amount by the appropriate total sales denominator, as discussed in the ''Subsidies Valuation Information'' section above, and in the Preliminary Calculations Memoranda, to derive a subsidy rate of 0.63 percent *ad valorem* for Trina Solar.

As discussed below under the section ''Programs for Which Additional Information is Required,'' we will be requesting additional information regarding land-use rights provided to Wuxi Suntech.

E. ''Two Free, Three Half'' Program for Foreign-Invested Enterprises

Under Article 8 of the ''Income Tax Law of the People's Republic of China for Enterprises with Foreign Investment and Foreign Enterprises,'' an FIE that is ''productive'' and scheduled to operate for more than ten years may be exempted from income tax in the first two years of profitability and pay income taxes at half the standard rate for the next three years. According to the GOC, the program was terminated effective January 1, 2008, by the Enterprise Income Tax Law, but

[90] Additional Documents Memorandum (which includes the Directory Catalogue on Readjustment of Industrial Structure (2005 version)) at Attachment VI.

[91] *See, e.g., Tires Final Determination,* and accompanying Issues and Decision Memorandum at Comment E2.

[92] *See* section 771(5)(E)(ii) of the Act.

[93] *See also* 19 CFR 351.505(c).

[94] The Department has concluded that these data do not already include delivery charges. *See* Preliminary Benchmark Memorandum.

[95] *See* Preliminary Benchmark Memorandum for a full explanation of how the benchmarks were adjusted.

[96] *See* 19 CFR 351.511(a).

companies already enjoying the preference were permitted to continue paying taxes at reduced rates. Trina Solar did not claim these tax exemptions during the POI. However, two of Wuxi Suntech's cross-owned affiliated companies, Luoyang Suntech and Zhenjiang Huantai, paid taxes at a reduced rate under this program during the POI.

The Department has previously found the ''Two Free, Three Half'' program to confer a countervailable subsidy.[97] Consistent with the earlier cases, we preliminarily determine that the ''Two Free, Three Half'' income tax exemption/reduction confers a countervailable subsidy. The exemption/reduction is a financial contribution in the form of revenue forgone by the GOC and it provides a benefit to the recipient in the amount of the tax savings.[98] We also determine that the exemption/reduction afforded by the program is limited as a matter of law to certain enterprises, *i.e.,* productive FIEs, and, hence, is specific under section 771(5A)(D)(i) of the Act.

To calculate the benefit, we treated the income savings by Luoyang Suntech and Zhenjiang Huantai as a recurring benefit, consistent with 19 CFR 351.524(c)(1). To compute the amount of the tax savings, we compared the two companies' tax rates to the rates they would have paid in the absence of the program. We divided Luoyang Suntech's and Zhenjiang Huantai's tax savings for their returns filed during the POI by the appropriate total sales denominator, as discussed in the ''Subsidies Valuation Information'' section above, and in the Preliminary Calculations Memoranda, in accordance with 19 CFR 351.525(b)(6)(ii) and 19 CFR 351.525(b)(6)(iv), respectively. We then summed the two companies' *ad valorem* rates to compute Suntech's total *ad valorem* rate under this program. On this basis, we preliminarily determine a countervailable subsidy rate for Wuxi Suntech of 0.13 percent *ad valorem* for this program.

F. Preferential Tax Programs for High or New Technology Enterprises [99]

According to the GOC, this program became effective in January 2008 as part of the Enterprise Income Tax Law of the PRC (Decree 63 of the PRC, 2007). Article 28.2 of the Enterprise Income Tax Law of the PRC provides for the reduction of the income tax rate to 15 percent, from 25 percent, for enterprises that are recognized as high or new technology enterprises (HNTEs), regardless of whether the enterprise is an FIE or domestic company. The ''Circular of the Ministry of Science and Technology, the Ministry of Finance and the State Administration of Taxation on Printing and Distributing the Administrative Measures for Certification of New and High Technology Enterprises'' (Guo Ke Fa Huo {2008} No. 172), of April 14, 2008, identifies HNTEs as enterprises that have been registered for more than one year within the PRC and that have been engaged in continuous research and development and in the transformation of their scientific and technological achievements. This circular also specifically identifies the HNTEs that qualify for key state support, which includes renewable, clean energy technologies such as solar photovoltaic technologies.[100]

To apply as an HNTE, Chinese companies must complete a self-assessment process regarding whether they can meet the criteria for an HNTE, and they must submit the requisite application form, business license and tax registration forms, and documents that establish that the company has been conducting high technological or innovative activities. Enterprises that meet the eligibility criteria will be certified as HNTEs by the approving GOC authority, and this designation remains effective for three years. Both Trina Solar and Wuxi Suntech were recognized as HNTEs by the GOC during the POI, and their income tax rates were therefore reduced from 25 percent to 15 percent for tax returns filed during the POI as a result.

We preliminarily determine that the reduction in income tax paid by HNTEs under this program confers a countervailable subsidy. The income tax reduction is a financial contribution in the form of revenue forgone by the government, and it provides a benefit to the recipients in the amount of the tax savings, pursuant to section 771(5)(D)(ii) of the Act and 19 CFR 351.509(a)(1). We also preliminarily determine that the income tax reduction afforded by this program is limited as a matter of law to certain enterprises, *i.e.,* HNTEs, and, thus, is specific under section 771(5A)(D)(i) of the Act.

To calculate the benefit from this program to Trina Solar and Wuxi Suntech, we treated the income tax reductions claimed by Trina Solar and Wuxi Suntech as recurring benefits, consistent with 19 CFR 351.524(c)(1). To compute the amount of the tax savings, we compared their tax rates (15 percent) to the rate that would have been paid by Trina Solar and Wuxi Suntech otherwise (the standard income tax rate of 25 percent). We multiplied the difference by the taxable income of each company. We then divided these amounts by the appropriate total sales denominator, as discussed in the ''Subsidies Valuation Information'' section above, and in the Preliminary Calculations Memoranda. On this basis, we preliminarily determine a countervailable subsidy rate of 1.25 percent *ad valorem* for Trina Solar and 0.28 percent *ad valorem* for Wuxi Suntech.

G. Import Tariff and Value Added Tax (VAT) Exemptions for Use of Imported Equipment

Enacted in 1997, the ''Circular of the State Council on Adjusting Tax Policies on Imported Equipment'' (GUOFA No. 37), exempts both FIEs and certain domestic enterprises from VAT and tariffs on imported equipment used in projects identified in related catalogues. The NDRC, or its provincial branch, provides a certificate to enterprises that receive the exemption. The objective of the program is to encourage foreign investment and to introduce foreign advanced technology equipment and industry technology upgrades. Trina Solar, Wuxi Suntech, Luoyang Suntech, Shanghai Suntech, Zhenjiang Huantai, and Suzhou Kuttler received VAT and tariff exemptions under this program as FIEs. The Department has previously found VAT and tariff exemptions under this program to confer countervailable subsidies.[101]

Consistent with the earlier cases, we preliminarily determine that VAT and tariff exemptions on imported equipment confer a countervailable subsidy. The exemptions are a financial contribution in the form of revenue forgone by the GOC and they provide a benefit to the recipient in the amount of VAT and tariff savings.[102] We also

[97] *See CFS from the PRC* and CFS from the PRC Decision Memorandum at 11–12; *see also Seamless Pipe Final Determination,* and Seamless Pipe from the PRC Decision Memorandum at 25.

[98] *See* section 771(5)(D)(ii) of the Act and 19 CFR 351.509(a)(1).

[99] The Department notes we initiated an investigation of a program entitled, ''Preferential Tax Programs for FIEs Recognized as High or New Technology Enterprises.'' *See Initiation Notice* and accompanying Initiation Checklist at 20. The GOC states that this income tax reduction program for FIEs was terminated, but that a replacement program was created in 2008 by the Enterprise Income Tax Law of the PRC. *See* the GOC's January 31, 2012 questionnaire response at II–65.

[100] This program was described in detail in the GOC's March 1, 2012 supplemental questionnaire response at 23–24.

[101] *See* CFS from the PRC Decision Memorandum at 13–14; *see also Seamless Pipe Final Determination,* and Seamless Pipe from the PRC Decision Memorandum at 23–25.

[102] *See* section 771(5)(D)(ii) of the Act and 19 CFR 351.510(a)(1).

preliminarily determine that the VAT and tariff exemptions afforded by the program are specific under section 771(5A)(D)(iii)(I) of the Act because the program is limited to certain enterprises, *i.e.,* FIEs and domestic enterprises involved in ''encouraged'' projects.[103]

Normally, we treat exemptions from indirect taxes and import charges, such as VAT and tariff exemptions, as recurring benefits, consistent with 19 CFR 351.524(c)(1), and allocate the benefits to the year in which they were received. However, when an indirect tax or import charge exemption is provided for, or tied to, the capital structure or capital assets of a firm, the Department normally treats it as a non-recurring benefit and allocates the benefit to the firm over the AUL.[104] In the instant investigation, Trina Solar, Wuxi Suntech, Luoyang Suntech, Shanghai Suntech, Zhenjiang Huantai, and Suzhou Kuttler have provided a list of VAT and tariff exemptions that they received for capital equipment imported after December 11, 2001. Based on this submitted information, we preliminarily determine that the VAT and tariff exemptions are tied to the capital structure or capital assets of these companies, and, as such, should be allocated over time.

To calculate the countervailable subsidy, we used our standard methodology for non-recurring grants.[105] In the years that the benefits received by each company under this program exceeded 0.5 percent of relevant sales for that year, we allocated the benefits over the AUL of 10 years, pursuant to 19 CFR 351.524(b)(1); in the years that the benefits received by each company under this program did not exceed 0.5 percent of relevant sales for that year, we expensed those benefits to the years that they were received, pursuant to 19 CFR 351.524(b)(2). We used the discount rates described above in the section ''Subsidies Valuation Information,'' to calculate the amount of the benefit allocable to the POI. We then divided the benefit amount by the appropriate sales denominators as discussed in the ''Subsidies Valuation Information'' section above. On this basis, we preliminarily determine that Trina Solar received a countervailable benefit of 0.45 percent *ad valorem* and Wuxi Suntech received a countervailable benefit of 0.55 percent *ad valorem* for this program.

H. VAT Rebates on FIE Purchases of Chinese-Made Equipment

As outlined in GUOSHUIFA (1999) No. 171, ''Trial Administrative Measures on Purchase of Domestically Produced Equipment by FIEs,'' the GOC refunds the VAT on purchases of certain Chinese produced equipment to FIEs if the equipment is used for certain encouraged projects identified in related catalogues.[106] The Department has previously found this program to be countervailable.[107]

Trina Solar reported using this program from 2005 through 2009; Louyang Suntech reported using this program in 2008; and Zhenjiang Huantai reported using this program from 2004 through 2008. We preliminarily determine that the rebate of the VAT paid on purchases of Chinese-made equipment by FIEs confers a countervailable subsidy. The rebates are a financial contribution in the form of revenue forgone by the GOC and they provide a benefit to the recipients in the amount of the tax savings.[108] We further preliminarily determine that the VAT rebates are contingent upon the use of domestic over imported equipment and, hence, specific under section 771(5A)(A) and (C) of the Act.

Normally, we treat rebates from indirect taxes and import charges, such as VAT rebates, as recurring benefits, consistent with 19 CFR 351.524(c)(1), and expense these benefits in the year they were received. However, when an indirect tax or import charge exemption is provided for, or tied to, the capital structure or capital assets of a firm, the Department normally treats it as a non-recurring benefit and allocates the benefit to the firm over the AUL.[109] Because the rebates under this program were tied to purchased equipment, we preliminarily determine that the benefits under this program are tied to the capital structure or capital assets of the companies and that they should be allocated over time.

For those companies that received benefits under this program, we applied the ''0.5 percent test,'' pursuant to 19 CFR 351.524, for each of the years in which rebates were received. For the years in which the rebate amount was less than 0.5 percent of the relevant sales figure, we expensed the rebates in the year of receipt, consistent with 19 CFR 351.524(a). For those years in which the VAT rebates were greater than or equal to 0.5 percent, we allocated the rebate amount over the AUL. We used the discount rates described above in the ''Subsidies Valuation Information'' section to calculate the amount of the benefit allocable to the POI. On this basis, we preliminarily determine that Trina Solar received a countervailable subsidy rate of 0.01 percent *ad valorem* under this program. As Luoyang Suntech and Zhenjiang Huantai did not receive rebates during the POI and, as none of the rebates they received prior to the POI passed the 0.5 percent test, no benefits for either company were allocated to the POI. Therefore, we preliminarily determine that Wuxi Suntech did not receive a benefit under this program during the POI.

I. Sub-Central Government Subsidies for Development of ''Famous Brands'' and ''China World Top Brands''

According to the ''Implementation Opinion on Further Promoting the Development of Brand Economy'' (XIZHENGFA {2006} No. l06), the government of Wuxi City provides a lump sum award to enterprises that receive a ''famous brands'' certificate. The award is jointly provided by the city, county, and district finance bureaus. Though this program is operated at the local level, the GOC issued the circular titled ''Measures for the Administration of Chinese Top-Brand Products,'' which requires that firms provide information in their ''famous brands'' applications concerning their export ratios as well as the extent to which their product quality meets international standards.[110] During the POI, Wuxi Suntech reported receiving a famous brands grant under this program from the local government.

We preliminarily determine that the grant that Wuxi Suntech received under this program constitutes a financial contribution and a benefit under sections 771(5)(D)(i) and 771(5)(E) of the Act, respectively. Regarding specificity, section 771(5A)(B) of the Act states that an export subsidy is a subsidy that is, in law or in fact, contingent upon export performance, alone or as one of two or more conditions. Consistent with prior determinations regarding grants under

[103] *See* CFS from the PRC Decision Memorandum at Comment 16.

[104] *See* 19 CFR 351.524(c)(2)(iii) and 19 CFR 351.524(d)(2).

[105] *See* 19 CFR 351.524(b).

[106] *See* the GOC's January 31, 2012 questionnaire response at II–79, and at Exhibit O–II–D–2–a.

[107] *See* Citric Acid from the PRC Decision Memorandum at 20; *see also* CFS from the PRC Decision Memorandum at 13–14.

[108] *See* section 771(5)(D)(ii) of the Act and 19 CFR 351.510(a)(1).

[109] *See* 19 CFR 351.524(c)(2)(iii) and 19 CFR 351.524(d)(2).

[110] *See* the GOC's March 1, 2012 supplemental questionnaire response at Exhibit S1–1–a, Chapter 3 of the ''Measures for the Administration of Chinese Top-Brand Products.''

the famous brands program,[111] we determine that the grant provided to Wuxi Suntech under the ''famous brands'' program is contingent on export activity. As noted above, ''Measures for the Administration of Chinese Top-Brand Products'' of the central government makes clear that one criterion under this program is a company's export activity. As such, therefore, we find that the program is specific under section 771(5A)(B) of the Act. Grants are normally treated as non-recurring subsidies under 19 CFR 351.524(c). After conducting the ''0.5 percent test'' of 19 CFR 351.524(b)(2), we determine that the grant should be expensed to the year of receipt (*i.e.,* the POI). To calculate the subsidy, we divided the full amount of the grant received in the POI by the appropriate total sales denominator, as discussed in the ''Subsidies Valuation Information'' section above, and in the Preliminary Calculations Memoranda, to determine a subsidy rate less than 0.005 percent *ad valorem.* As such, this subsidy has no impact on the overall subsidy rate.

J. Discovered Grants

As explained above, the Department has determined that numerous grants provided to respondents are countervailable based upon AFA. Pursuant to 19 CFR 351.524(c) the Department normally treats grants as non-recurring subsidies. As such, the Department applied the ''0.5 percent test'' of 19 CFR 351.524(b) to each grant, individually, to determine whether it should be allocated. None of the Discovered Grants received during the POI passed the 0.5 percent test and, therefore, all such grants were attributed to the POI. In addition, some of the Discovered Grants received prior to the POI passed the 0.5 percent test and have been allocated to the POI. We calculated the subsidy from each grant separately by dividing the entire amount of the grant by the appropriate sales figure for the POI. Respondents' program descriptions indicate certain grants were export contingent. We determined such grants were export subsidies and used total export sales as the denominator. If the subsidy rate calculated for any particular grant was less than 0.005 percent *ad valorem,* that grant was determined to have no impact on the overall subsidy rate, and was therefore disregarded. After summing all the subsidy rates arising from the remaining Discovered Grants, rounded to the nearest one-hundredth of one percent, we calculated a combined subsidy rate of 0.39 percent *ad valorem* for Trina Solar and 0.36 percent *ad valorem* for Wuxi Suntech. The grants found to be used during the POI that are publicly identified by respondents are listed below. Those grants that were bracketed by the respondents, along with the individual subsidy rates for all grants, are listed in the business-proprietary Preliminary Calculations Memoranda.[112]

1. Wuxi Airport 800KW program
2. PV Technology Research Institute of Jiangsu (Suntech)
3. Fund for Solar Optoelectronic Application Demonstration by Management Committee of the New District
4. Self-Research on Core Equipment of Solar PV and Semiconductor Lighting Industry—Self Research on New On-Line Direct Method PEVCD
5. Demonstration Project of 300KW Roof Solar PV Grid Power Generation System
6. Industrialization and Research of New Solar Cells
7. Research and Industrialization of Thin Film Cells
8. Research on Highly Efficient and Low-Cost Thin Film Cells
9. Technology and Application Research on Glass-Base Suede Gazno Transparent and Electrically Conductive Film Manufacture
10. Demonstration Program of 300KV Roof Solar PV Grid Power Generation System
11. Renewable Energy of Finance of Bureau, Wuxi City
12. Research on New-Style High-Transmission Solar Cell Reducing the Refection Film with Nano Structure
13. Fund for Construction of Suntech's Energy Institution by the Management Committee of New District
14. Public Welfare Project Funding From Supervision and Examination Station of Product Quality, Wuxi City
15. Provincial Export Credit Insurance Supporting Development Fund Allocation by Management Committee of New District from December 2008 to June 2009
16. Patent Fund from Management Committee of New District, Wuxi Government
17. Special Reward for ''333'' Program by Municipal Organization Department
18. Science and Research Budget Allocation for Renewable-Energy Construction Application Technology Project of Wuxi Suntech's R&D Building by Construction Bureau of Wuxi
19. Photovoltaic Technology Research Expenses by Personnel Bureau
20. Social Insurance Fund for Employers from Sichuan Earthquake Stricken Area
21. Import Discount by Jiangsu Provincial Government
22. Employment Expansion Planning Reward by Management Committee of New District
23. Fund for Demonstration Company of 2009 Provincial Intelligence Introduction Program
24. The First Group of Patent Fund in 2010 Provided by the Wuxi Government
25. Research, Development and Industrialization of Technology and Key Equipment for P–Type Solar Power Cells with High Efficiency and Low Cost
26. Award for Luoyang City Outstanding Private Enterprise for 2009
27. Plan for Thousand Talents

II. Programs Preliminarily Determined To Be Not Used by Respondents in the POI

We preliminarily determine that Trina Solar and Wuxi Suntech did not apply for or receive benefits during the POI under the programs listed below. Because of the complicated cross-ownership issues in this investigation, we are continuing to gather information concerning the reported non-use of these programs by all companies that may be cross-owned within each company's corporate structure.

[111] *See, e.g., Aluminum Extrusions From the People's Republic of China: Final Affirmative Countervailing Duty Determination,* 76 FR 18521 (April 4, 2011), and accompanying Issues and Decision Memorandum at the section ''GOC and Sub-Central Government Grants, Loans, and Other Incentives for Development of Famous Brands and China World Top Brands,'' and *Pre-Stressed Concrete Steel Wire Strand from the People's Republic of China: Final Affirmative Countervailing Duty Determination,* 75 FR 28557 (May 21, 2010) (*PC Strand from the PRC*), and accompanying Issues and Decision Memorandum (PC Strand from the PRC Decision Memorandum) at the section ''Subsidies for Development of Famous Export Brands and China World Top Brands at Central and Sub-Central Level.''

[112] The Department intends to seek clarification from the respondents regarding why most program names are business proprietary.

A. Export Product Research and Development Fund

B. Subsidies for Development of ''Famous Brands'' and ''China World Top Brands''

C. Special Energy Fund (Established by Shandong Province

D. Funds for Outward Expansion of Industries in Guangdong Province

E. Government Provision of Aluminum for LTAR

Petitioner's allegation focused on primary aluminum.[113] Both respondents reported that they did not purchase primary aluminum, only aluminum extrusions, a downstream product produced from primary aluminum. Therefore, we are preliminarily finding this program to be not used by the respondents.

F. Income Tax Reductions for Export-Oriented FIEs

G. Income Tax Benefits for FIEs Based on Geographic Location

H. Local Income Tax Exemption and Reduction Programs for ''Productive'' FIEs

I. Tax Refunds for Reinvestment of FIE Profits in Export-Oriented Enterprises

J. Tax Reductions for High and New-Technology Enterprises Involved in Designated Projects

K. Preferential Income Tax Policy for Enterprises in the Northeast Region

L. Guangdong Province Tax Programs

M. VAT and Tariff Exemptions for Purchases of Fixed Assets Under the Foreign Trade and Development Fund Program

N. Tax Reductions for FIEs Purchasing Chinese-Made Equipment

Certain cross-owned affiliates of the respondents reported receiving tax reductions under this program prior to the POI. Because the Department has treated this program as a recurring subsidy program in prior investigations, we preliminarily determine the reductions to be recurring in this investigation as well. Therefore, no benefits were received during the POI by the respondents.

O. Export Credit Subsidy Programs

P. Export Guarantees and Insurance for Green Technology

After analyzing the responses of Trina Solar and Wuxi Suntech, the Department preliminarily determines that neither of the respondents received benefits under this program during the POI.[114]

Q. Discovered Grants

As explained above, the Department has determined, as AFA, that numerous grants provided to the respondents are countervailable. Pursuant to 19 CFR 351.524(c) the Department normally treats grants as non-recurring subsidies. As such, the Department applied the ''0.5 percent test'' of 19 CFR 351.524(b) to each grant, individually, to determine whether it should be allocated. Most of the Discovered Grants received prior to the POI failed the 0.5 percent test and were therefore expensed prior to the POI. Thus, all such grants are preliminarily found to have been not used during the POI by the respondents. None of these grants were publicly identified by the respondents. Therefore, these ''non-used'' grants are all listed in the business-proprietary Preliminary Calculations Memoranda.

III. Programs for Which Additional Information Is Required

The Department finds that additional information is needed in order to determine whether the following programs are countervailable. After gathering and analyzing the additional information, the Department intends to issue a post-preliminary analysis regarding whether these programs are countervailable.

A. The Provision of Land for LTAR to Wuxi Suntech

As discussed above, the GOC did not provide all of the information requested regarding how prices paid by respondents for land-use rights were determined and the information provided requires further clarification.[115] The Department intends to request further information for land provided to Wuxi Suntech. The Department also intends to request additional information from the GOC regarding the reported private nature of some of the parties from which Wuxi Suntech purchased land-use rights.

B. Provision of Electricity for LTAR

The questionnaire responses were not complete regarding the alleged provision of electricity for LTAR. These questions requested information needed by the Department to determine whether such a provision was specific with the meaning of section 771(5A) of the Act, and whether a benefit within the meaning of section 771(5)(E) of the Act was provided. The Department intends to request further information from the GOC after the issuance of this preliminary determination.

C. Enterprise Income Tax Law, Research and Development (R&D) Program

According to the GOC, Article 30.1 of the Enterprise Income Tax Law of the PRC created a new program regarding the deduction of research and development expenditures for all enterprises.[116] This provision allows enterprises to deduct, through tax credits, research expenditures incurred in the development of new technologies, products, and processes. Article 95 of ''The Release of Regulations on the Implementation of Enterprise Income Tax Law of the People's Republic of China by the State Council, [2007] No. 512,'' December 6, 2007, provides that if eligible research expenditures do not ''form part of the intangible assets value,'' an additional 50 percent deduction from taxable income may be taken on top of the actual accrual amount. Where these expenditures form the value of certain intangible assets, the expenditures may be amortized based on 150 percent of the intangible assets costs. Trina Solar and Wuxi Suntech both reported benefitting from this program during the POI. The Department intends to request additional information regarding the specificity of the program.

Verification

In accordance with section 782(i)(1) of the Act, the Department will verify the information submitted by the GOC, Trina Solar, and Wuxi Suntech, prior to making our final determination.

Suspension of Liquidation

In accordance with section 705(c)(1)(B)(i)(I) of the Act, we have calculated an individual countervailable subsidy rate for each respondent. Section 705(c)(5)(A)(i) of the Act states that for companies not individually investigated, we will determine an all others rate equal to the weighted average of the countervailable subsidy rates established for exporters and producers individually investigated, excluding any zero and *de minimis* countervailable subsidy rates, and any

[113] *See* Initiation Checklist at 12.

[114] *See* Preliminary Calculations Memoranda for an analysis of the respondents' business proprietary information.

[115] The Department did not ask exactly the same questions of the GOC regarding land provided to both respondents. The Department had additional questions regarding auction sales to Trina Solar that were not relevant to Suntech.

[116] The GOC notes that the provision providing this income tax reduction to FIEs was terminated in 2008 by the Enterprise Income Tax Law of the PRC. *See* the GOC's January 31, 2012 submission at II–62.

rates based entirely on AFA under section 776 of the Act.

Notwithstanding the language of section 705(c)(5)(A)(i) of the Act, we have not calculated the ''all others'' rate by weight averaging the rates of Trina Solar and Wuxi Suntech, because doing so risks disclosure of proprietary information. Therefore, we have calculated an average rate using other information on the record.[117] Since both Trina Solar and Wuxi Suntech received countervailable export subsidies and the ''all others'' rate is an average based on the individually investigated exporters and producers, the ''all others'' rate includes export subsidies.

We preliminarily determine the total countervailable subsidy rates to be as follows.

Company	Subsidy rate
Changzhou Trina Solar Energy Co., Ltd.	4.73 percent *ad valorem*.
Trina Solar (Changzhou) Science and Technology Co., Ltd (collectively, Trina Solar)	
Wuxi Suntech Power Co., Ltd	2.90 percent *ad valorem*.
Luoyang Suntech Power Co., Ltd	
Suntech Power Co., Ltd	
Yangzhou Rietech Renewal Energy Co., Ltd	
Zhenjiang Huantai Silicon Science & Technology Co., Ltd	
Kuttler Automation Systems (Suzhou) Co., Ltd (collectively, Wuxi Suntech)	
All Others Rate	3.61 percent *ad valorem*.

In accordance with sections 703(d)(1)(B) and (2), and 703(e)(2)(A) of the Act, in light of our preliminary affirmative determination of critical circumstances, we are directing CBP to suspend liquidation of all entries of the subject merchandise from the PRC that are entered or withdrawn from warehouse, for consumption on or after the date 90 days prior to the date of publication of this notice in the **Federal Register**, and to require a cash deposit or bond for such entities of the merchandise in the amounts indicated above.

ITC Notification

In accordance with section 703(f) of the Act, we will notify the ITC of our determination. In addition, we are making available to the ITC all non-privileged and non-proprietary information relating to this investigation. We will allow the ITC access to all privileged and business proprietary information in our files, provided the ITC confirms that it will not disclose such information, either publicly or under an administrative protective order, without the written consent of the Assistant Secretary for Import Administration.

In accordance with section 705(b)(2) of the Act, if our final determination is affirmative, the ITC will make its final determination within 45 days after the Department makes its final determination.

Disclosure and Public Comment

In accordance with 19 CFR 351.224(b), we will disclose to the parties the calculations for this preliminary determination within five days of its announcement. We will notify parties of the schedule for submitting case briefs and rebuttal briefs, in accordance with 19 CFR 351.309(c) and 19 CFR 351.309(d)(1), respectively. A list of authorities relied upon, a table of contents, and an executive summary of issues should accompany any briefs submitted to the Department. Executive summaries should be limited to five pages total, including footnotes. Section 774 of the Act provides that the Department will hold a public hearing to afford interested parties an opportunity to comment on arguments raised in case or rebuttal briefs, provided that such a hearing is requested by an interested party.

Interested parties who wish to request a hearing, or to participate if one is requested, must submit a written request to the Assistant Secretary for Import Administration, U.S. Department of Commerce, Room 1870, within 30 days of the publication of this notice, pursuant to 19 CFR 351.310(c). Requests should contain: (1) The party's name, address, and telephone number; (2) the number of participants; and (3) a list of the issues to be discussed. Oral presentations will be limited to issues raised in the briefs. If a request for a hearing is made in this investigation, we intend to hold the hearing two days after the deadline for submission of the rebuttal briefs, pursuant to 19 CFR 351.310(d). Any such hearing will be held at the U.S. Department of Commerce, 14th Street and Constitution Avenue NW., Washington, DC 20230. Parties should confirm by telephone, the date, time, and place of the hearing 48 hours before the scheduled time.

This determination is issued and published pursuant to sections 703(f) and 771(i) of the Act.

Dated: March 19, 2012.

Paul Piquado,

Assistant Secretary for Import Administration.

[FR Doc. 2012–7273 Filed 3–23–12; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

National Institute of Standards and Technology

[Docket Number: 120216139–2138–01]

Buy American Exception Under the American Recovery and Reinvestment Act of 2009

AGENCY: National Institute of Standards and Technology, U.S. Department of Commerce.

SUMMARY: The Department of Commerce, National Institute of Standards and Technology is providing notice of a determination of an exception to the Buy American Provisions of the American Recovery and Reinvestment Act of 2009 (ARRA or Recovery Act), for inverters necessary for the construction of a solar array system at NIST's WWVH radio station in Kauai, HI.

FOR FURTHER INFORMATION CONTACT: Jason Gerloff, Contracting Officer, Acquisition Management Division, 303–497–6320, National Institute of Standards and Technology, 325 Broadway, Boulder, CO 80305.

SUPPLEMENTARY INFORMATION: Section 1605 of the Recovery Act (Pub. L. 111–5) prohibits use of recovery funds ''for a project for the construction, alteration, maintenance, or repair of a public building or public work unless all of the iron, steel, and manufactured goods

[117] *See* Memorandum to the File from Emily Halle, ''Calculation of the All-Others Rate,'' March 19, 2012, providing the precise calculation and demonstrating the proximity of the resulting figure to the figure derived using the business-proprietary data.

used in the project are produced in the United States.'' However, section 1605(b)(2) allows the head of a Federal department or agency to issue a ''determination of nonavailability'' if the iron, steel, or manufactured good is not produced or manufactured in the United States in sufficient and reasonably available quantities and of a satisfactory quality. Pursuant to section 1605(b)(2), and a delegation of authority by the Secretary of Commerce, the NIST Director has determined that the required inverters were not manufactured in the United States.

In May 2010, NIST awarded a Recovery Act contract in the amount of $1,415,000.00 to Adon Construction for the construction of a 120kw photovoltaic solar array system to be built in eight 15kw sub-arrays at NIST's WWVH radio station in Kauai, HI. The objective of the solar array project is to produce power for the radio station and feed electricity back to the local grid. By doing this, the NIST radio station will be able to cut its utility costs and show a cost savings for future years on electricity.

The contract specifications required that all exterior photovoltaic equipment be in stainless steel or PVC enclosures that carried a minimum National Electrical Manufacturers Association (NEMA) 3R rating. An inverter is an essential piece of electrical equipment that converts DC electrical power to AC electrical power; without the inverters, the solar array could not be used for site operations. In July of 2010, the contractor proposed using three 5kw, 208V AC, single phase inverters inside of NEMA 3R, 6060 aluminum enclosures for each 15kw sub-array. The contractor notified NIST that its research indicated there were no American-made products that met the project specifications. NIST completed a review of the contractor's findings and concurred that neither the 5kw nor 15kw inverters in stainless steel, PVC, or aluminum 6060 enclosures were produced or manufactured in the U.S. in sufficient and reasonably available quantities of a satisfactory quality in July 2010. NIST also determined that the aluminum enclosures were an acceptable alternative to the stainless steel or PVC materials originally specified because they would be able to withstand the rigors of outdoor use in a tropical climate.

Based on NIST and the contractor's review of the market place and various vendors' product availability, NIST determined there were no inverters manufactured in the United States that met the contract specifications or NIST's requirements.

Authority: Pub. L. 111–5, section 1605.

Dated: March 16, 2012.

Willie E. May,

Associate Director for Laboratory Programs.

[FR Doc. 2012–7222 Filed 3–23–12; 8:45 am]

BILLING CODE 3510–13–P

DEPARTMENT OF COMMERCE

National Institute of Standards and Technology

Work Group on Alternative Test Methods for Commercial Measuring Devices

AGENCY: National Institute of Standards and Technology, Commerce.

ACTION: Notice.

SUMMARY: The National Institute of Standards and Technology (NIST) is forming a Work Group (WG) to examine alternative methods for testing the accuracy of commercial measuring devices including, but not limited to retail motor-fuel dispensers. The WG will investigate the current methodology and standards (*e.g.*, neck-type volumetric field standards and associated test procedures) widely used by weights and measures officials and service companies to test commercial measuring devices as well as proposed alternatives to ensure that the methodologies and standards facilitate measurements that are traceable to the International System of Units (SI). WG membership is open to any interested party. This notice also summarizes key issues to be considered by this WG.

DATES: An initial WG meeting will be held on Tuesday, April 24, 2012, from 10 a.m. to 5 p.m. Subsequent meeting dates will be determined based on the concurrence of the WG members.

ADDRESSES: An initial meeting of the WG will be at NIST, 100 Bureau Drive, Gaithersburg, MD 20899. Subsequent locations for WG meetings may include NIST as well as sites suggested by WG members offering to host meetings. WG meetings will also be conducted via Web conferencing. Please note admittance instructions under the **SUPPLEMENTARY INFORMATION** section of this notice.

FOR FURTHER INFORMATION CONTACT: Ms. Carol Hockert, Chief, NIST, Office of Weights and Measures, 100 Bureau Drive, Stop 2600, Gaithersburg, MD 20899–2600. You may also contact Ms. Hockert by telephone (301) 975–5507 or by email at *Carol.Hockert@nist.gov.* Please contact Ms. Hockert for information on upcoming meetings.

SUPPLEMENTARY INFORMATION: The formation of this WG and its associated meetings is intended to bring together government officials and representatives of business, industry, trade associations, and consumer organizations on the subject of standards and test procedures used in the testing of commercial measuring devices by regulatory officials and service companies. NIST participates to promote uniformity among the states in laws, regulations, methods, and testing equipment that comprises the regulatory control of commercial weighing and measuring devices and other trade and commerce issues.

Included among the topics to be discussed by the WG for current and proposed device technologies used in testing commercial measuring devices are: metrology laboratory standards and test procedures; uncertainties; measurement traceability; tolerances and other technical requirements for commercial measuring devices; existing standards for testing equipment; field implementation; data analysis; field test procedures; field enforcement issues; training at all levels; and other relevant issues identified by the WG. WG recommendations may result in the revision of current standards or the development of new standards for testing equipment, including documents such as the NIST Handbook 105 Series for field standards; NIST Handbook 44, *Specifications, Tolerances, and Technical Requirements for Weighing and Measuring Devices;* and NIST Examination Procedure Outlines, as well as proposed changes to requirements and testing procedures for commercial measuring devices.

All visitors to the NIST site are required to pre-register to be admitted. Anyone wishing to attend this meeting must register by close of business Tuesday, April 17, 2012, in order to attend. Please submit your full name, email address, and phone number to Ms. Hockert. Non-U.S. citizens must also submit their country of citizenship, title, and employer/sponsor. Ms. Hockert's email address is *carol.hockert@nist.gov* and her phone number is (301) 975–5507.

Dated: March 16, 2012.

Willie E. May,

Associate Director for Laboratory Programs.

[FR Doc. 2012–7224 Filed 3–23–12; 8:45 am]

BILLING CODE 3510–13–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

Proposed Information Collection; Comment Request; Observer Programs' Information that Can Be Gathered Only Through Questions

AGENCY: National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice.

SUMMARY: The Department of Commerce, as part of its continuing effort to reduce paperwork and respondent burden, invites the general public and other Federal agencies to take this opportunity to comment on proposed and/or continuing information collections, as required by the Paperwork Reduction Act of 1995.

DATES: Written comments must be submitted on or before May 25, 2012.

ADDRESSES: Direct all written comments to Jennifer Jessup, Departmental Paperwork Clearance Officer, Department of Commerce, Room 6616, 14th and Constitution Avenue NW., Washington, DC 20230 (or via the Internet at *JJessup@doc.gov*).

FOR FURTHER INFORMATION CONTACT: Requests for additional information or copies of the information collection instrument and instructions should be directed to Chris Rilling, (301) 427–8168, (*Chris.Rilling@noaa.gov*).

SUPPLEMENTARY INFORMATION:

I. Abstract

The National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS) deploys fishery observers on United States (U.S.) commercial fishing vessels and to fish processing plants in order to collect biological and economic data. NMFS has at least one observer program in each of its six Regions. These observer programs provide the most reliable and effective method for obtaining information that is critical for the conservation and management of living marine resources. Observer programs primarily obtain information through direct observations by employees or agents of NMFS; and such observations are not subject to the Paperwork Reduction Act (PRA). However, observer programs also collect the following information that requires clearance under the PRA: (1) Standardized questions of fishing vessel captains/crew or fish processing plant managers/staff, which include gear and performance questions, safety questions, and trip costs, crew size and other economic questions; (2) questions asked by observer program staff/contractors to plan observer deployments; (3) forms that are completed by observers and that fishing vessel captains are asked to review and sign; (4) questionnaires to evaluate observer performance; and (5) a form to certify that a fisherman is the permit holder when requesting observer data from the observer on the vessel. NMFS seeks to renew OMB PRA clearance for these information collections.

The information collected will be used to: (1) Monitor catch and bycatch in federally-managed commercial fisheries; (2) understand the population status and trends of fish stocks and protected species, as well as the interactions between them; (3) determine the quantity and distribution of net benefits derived from living marine resources; (4) predict the biological, ecological, and economic impacts of existing management action and proposed management options; and (5) ensure that the observer programs can safely and efficiently collect the information required for the previous four uses. In particular, these biological and economic data collection programs contribute to legally mandated analyses required under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), the Endangered Species Act (ESA), the Marine Mammal Protection Act (MMPA), the National Environmental Policy Act (NEPA), the Regulatory Flexibility Act (RFA), Executive Order 12866 (EO 12866), as well as a variety of state statutes. The confidentiality of the data will be protected as required by the MSA, Section 402(b).

II. Method of Collection

The information will be collected by (1) NMFS observers while they are deployed on a vessel to observe a particular fishing trip; questions will be asked in-person to the captain, crew and/or owner (if on board the vessel) during the course of the observed trip; (2) via mail through a follow up surveys of economic information not available during the trip; (3) via telephone or mail survey by the observer program staff or contractor planning to deploy observers; or (4) via feedback questionnaires mailed to the vessel owners or captains to evaluate observer performance.

III. Data

OMB Control Number: 0648–0593.

Form Number: None.

Type of Review: Regular submission (extension of a currently approved information collection).

Affected Public: Business or other for-profit organizations.

Estimated Number of Respondents: 20,643.

Estimated Time per Response: 51 minutes. Information will be collected for observed fishing trips and deployments to fish processing plants; therefore, there will be multiple responses for some respondents, but counted as one response per trip or plant visit.

Estimated Total Annual Burden Hours: 26,172.

Estimated Total Annual Cost to Public: $1,160.

IV. Request for Comments

Comments are invited on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden (including hours and cost) of the proposed collection of information; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology.

Comments submitted in response to this notice will be summarized and/or included in the request for OMB approval of this information collection; they also will become a matter of public record.

Dated: March 21, 2012.

Gwellnar Banks,

Management Analyst, Office of the Chief Information Officer.

[FR Doc. 2012–7211 Filed 3–23–12; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XB110

Marine Mammals; File No. 17159

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; receipt of application.

SUMMARY: Notice is hereby given that Simon Nash, Parthenon Entertainment Ltd, 34 Whiteladies Road, Bristol, BS8 2LG, United Kingdom, has applied in due form for a permit to conduct commercial or educational photography

on spinner dolphins (*Stenella longirostris*).

DATES: Written, telefaxed, or email comments must be received on or before April 25, 2012.

ADDRESSES: These documents are also available upon written request or by appointment in the following offices:

Permits and Conservation Division, Office of Protected Resources, NMFS, 1315 East-West Highway Room 13705, Silver Spring, MD 20910; phone (301) 427–8401; fax (301) 713–0376; and

Pacific Islands Region, NMFS, 1601 Kapiolani Blvd., Rm. 1110, Honolulu, HI 96814–4700; phone (808) 944–2200; fax (808) 973–2941.

Written comments on this application should be submitted to the Chief, Permits and Conservation Division, at the address listed above. Comments may also be submitted by facsimile to (301) 713–0376, or by email to *NMFS.Pr1Comments@noaa.gov*. Please include the File No. in the subject line of the email comment.

Those individuals requesting a public hearing should submit a written request to the Chief, Permits and Conservation Division at the address listed above. The request should set forth the specific reasons why a hearing on this application would be appropriate.

FOR FURTHER INFORMATION CONTACT: Carrie Hubard or Kristy Beard, (301) 427–8401.

SUPPLEMENTARY INFORMATION: The subject permit is requested under the authority of the Marine Mammal Protection Act of 1972, as amended (MMPA; 16 U.S.C. 1361 *et seq.*) and the regulations governing the taking and importing of marine mammals (50 CFR part 216).

The applicant is requesting authorization to film spinner dolphins near Midway Atoll in the Pacific Ocean. Dolphins would be approached during morning and late afternoon when they are typically active, but would not be approached during their mid-day resting period. Filming techniques include above water from a vessel, a pole-mounted underwater camera, and a waterproof camera used by a snorkeling cameraman. Up to 1,300 dolphins could be approached annually during filming activities. Footage would be used primarily for a television documentary about Hawaiian wildlife that would be aired on Animal Planet in the U.S. and elsewhere internationally. The initial filming period is scheduled for two weeks in June/July 2012. The permit would be valid for five years.

In compliance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*), an initial determination has been made that the activity proposed is categorically excluded from the requirement to prepare an environmental assessment or environmental impact statement.

Concurrent with the publication of this notice in the **Federal Register**, NMFS is forwarding copies of the application to the Marine Mammal Commission and its Committee of Scientific Advisors.

Dated: March 20, 2012.

Tammy C. Adams,

Acting Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service.

[FR Doc. 2012–7252 Filed 3–23–12; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XB107

Pacific Fishery Management Council (Pacific Council); Public Meeting

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of a public meeting.

SUMMARY: The Pacific Council will convene a meeting of the Ecosystem Plan Development Team (EPDT) which is open to the public.

DATES: The EPDT will meet on Thursday, April 12, 2012 from 9 a.m. to 5 p.m., or when business for the day is completed.

ADDRESSES: The meeting will be held at the Hilton Seattle Airport, Mercer B Room, 17620 International Boulevard, Seattle, WA 98188–4001; telephone: (206) 244–4800.

FOR FURTHER INFORMATION CONTACT: Mike Burner, Staff Officer; telephone: (503) 820–2280.

SUPPLEMENTARY INFORMATION: Please note, this is not a public hearing; it is a work session for the primary purpose of drafting a report and recommendations to the Council on the Development of a Fishery Ecosystem Plan (FEP). The primary purpose of the meeting is to address Council requests from and since the November 2011 Council meeting, revise and expand sections of the Council's developing Fishery Ecosystem Plan, discuss the content and format of an annual ecosystem report, explore mechanisms for incorporating ecosystem science into stock assessments, and revisit the need and mechanisms for expanding protective measures for unexploited forage species. The EPDT may also develop recommendations for the June 2012 Council meeting.

Although non-emergency issues not contained in the meeting agenda may come before the EPDT for discussion, those issues may not be the subject of formal EPDT action during this meeting. EPDT action will be restricted to those issues specifically listed in this notice and any issues arising after publication of this notice that require emergency action under Section 305(c) of the Magnuson-Stevens Fishery Conservation and Management Act, provided the public has been notified of the intent to take final action to address the emergency.

Special Accommodations

This meeting is physically accessible to people with disabilities. Requests for sign language interpretation or other auxiliary aids should be directed to Mr. Kris Kleinschmidt at (503) 820–2280 at least 5 days prior to the meeting date.

Dated: March 21, 2012.

Tracey L. Thompson,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2012–7165 Filed 3–23–12; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XB106

New England Fishery Management Council; Public Meeting

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; public meeting.

SUMMARY: The New England Fishery Management Council (Council) is scheduling a public meeting of its Whiting Oversight Committee on April 17, 2012 to consider actions affecting New England fisheries in the exclusive economic zone (EEZ). Recommendations from this group will be brought to the full Council for formal consideration and action, if appropriate.

DATES: This meeting will be held on Tuesday, April 17, 2012 at 10 a.m.

ADDRESSES: The meeting will be held at the Hotel Providence, 139 Mathewson Street, Providence, RI 02903; telephone: (401) 861–8000; fax: (401) 454–4306.

Council address: New England Fishery Management Council, 50 Water Street, Mill 2, Newburyport, MA 01950.

FOR FURTHER INFORMATION CONTACT: Paul J. Howard, Executive Director, New England Fishery Management Council; telephone: (978) 465–0492.

SUPPLEMENTARY INFORMATION: The Oversight Committee will choose final alternatives for Draft Amendment 19, based on public hearing input and analysis of impacts. The draft alternatives include annual limits on catch and landings by fishery program and/or stock, in-season and post-season accountability measures including incidental possession limits, year-round red hake possession limits, and monitoring and specification procedures. These final alternatives will be recommended for approval at the April 24–26 Council meeting. Other matters relative to whiting or skate management may also be discussed.

Although non-emergency issues not contained in this agenda may come before this group for discussion, those issues may not be the subject of formal action during this meeting. Action will be restricted to those issues specifically listed in this notice and any issues arising after publication of this notice that require emergency action under section 305(c) of the Magnuson-Stevens Act, provided the public has been notified of the Council's intent to take final action to address the emergency.

Special Accommodations

This meeting is physically accessible to people with disabilities. Requests for sign language interpretation or other auxiliary aids should be directed to Paul J. Howard, Executive Director, at (978) 465–0492, at least 5 days prior to the meeting date.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: March 21, 2012.

Tracey L. Thompson,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2012–7164 Filed 3–23–12; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Telecommunications and Information Administration

[Docket No. 120214135–2203–02]

RIN 0660–XA27

Multistakeholder Process To Develop Consumer Data Privacy Codes of Conduct

AGENCY: National Telecommunications and Information Administration, U.S. Department of Commerce.

ACTION: Notice; Extension of Comment Period.

SUMMARY: The National Telecommunications and Information Administration (NTIA) announces that the closing deadline for submitting comments responsive to the March 5, 2012 request for public comments on the multistakeholder process to develop consumer data privacy codes of conduct has been extended until 5 p.m. Eastern Daylight Time (EDT) on April 2, 2012.

DATES: Comments are due by 5 p.m. EDT on April 2, 2012.

ADDRESSES: Written comments may be submitted by email to *privacyrfc2012@ntia.doc.gov.* Comments submitted by email should be machine-searchable and should not be copy-protected. Written comments also may be submitted by mail to 1401 Constitution Avenue NW., Room 4725, Washington, DC 20230. Responders should include the name of the person or organization filing the comment, as well as a page number on each page of their submissions. All comments received are a part of the public record and will generally be posted to *http://www.ntia.doc.gov/federal-register-notice/2012/comments-multistakeholder-process* without change. All personal identifying information (for example, name, address) voluntarily submitted by the commenter may be publicly accessible. Do not submit Confidential Business information or otherwise sensitive or protected information.

FOR FURTHER INFORMATION CONTACT: For general questions about this amended Notice contact Aaron Burstein, National Telecommunications and Information Administration, U.S. Department of Commerce, 1401 Constitution Avenue NW., Room 4725, Washington, DC 20230; telephone (202) 482–1055; email *aburstein@ntia.doc.gov.* Please direct media inquiries to NTIA's Office of Public Affairs, (202) 482–7002.

SUPPLEMENTARY INFORMATION: On February 23, 2012, the Executive Office of the President released *Consumer Data Privacy in a Networked World: A Framework for Protecting Privacy and Promoting Innovation in the Global Digital Economy* (''the Privacy and Innovation Blueprint'').[1] The Privacy and Innovation Blueprint articulates a Consumer Privacy Bill of Rights and directs NTIA to convene open, transparent, consensus-based processes in which stakeholders develop legally enforceable codes of conduct that implement the Consumer Privacy Bill of Rights in specific settings. On March 5, 2012, NTIA requested public comments on (1) which consumer data privacy issues should be the focus of NTIA-convened multistakeholder processes, and (2) specific procedural considerations that NTIA should take into account when initiating a privacy multistakeholder process.[2] The request for public comments set a deadline for submission of comments on March 26, 2012. NTIA announces that the closing deadline for submission of comments responsive to the March 5, 2012 request has been extended until 5 p.m. EDT on April 2, 2012.

Dated: March 20, 2012.

Lawrence E. Strickling,

Assistant Secretary for Communications and Information.

[FR Doc. 2012–7119 Filed 3–23–12; 8:45 am]

BILLING CODE 3510–60–P

[1] The White House, Consumer Data Privacy in a Networked World: A Framework for Protecting Privacy and Promoting Innovation in the Global Digital Economy, Feb. 2012, available at *http://www.whitehouse.gov/sites/default/files/privacy-final.pdf.*

[2] See 77 FR 13098 (Mar. 5, 2012), available at *http://www.ntia.doc.gov/files/ntia/publications/fr_privacy_rfc_notice_03052012_0.pdf.*

DEPARTMENT OF DEFENSE

Office of the Secretary

[Docket ID DoD–2012–OS–0038]

Proposed Collection; Comment Request

AGENCY: Office of the Under Secretary of Defense (Personnel and Readiness), DoD.

ACTION: Notice.

SUMMARY: In compliance with Section 3506(c)(2)(A) of the *Paperwork Reduction Act of 1995,* the Office of the Under Secretary of Defense (Personnel and Readiness) announces the following proposed public information collection and seeks public comment on the provisions thereof. Comments are invited on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of burden of the proposed information collection; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the information collection on respondents, including through the use of automated collection techniques or other forms of information technology.

DATES: Consideration will be given to all comments received by May 25, 2012.

ADDRESSES: You may submit comments, identified by docket number and title, by any of the following methods:

• *Federal eRulemaking Portal: http://www.regulations.gov*. Follow the instructions for submitting comments.

• *Mail:* Federal Docket Management System Office, 4800 Mark Center Drive, East Tower, Suite 02G09, Alexandria, VA 22350–3100.

Instructions: All submissions received must include the agency name, docket number and title for this **Federal Register** document. The general policy for comments and other submissions from members of the public is to make these submissions available for public viewing on the Internet at *http://www.regulations.gov* as they are received without change, including any personal identifiers or contact information.

FOR FURTHER INFORMATION CONTACT: To request more information on this proposed information collection or to obtain a copy of the proposal and associated collection instruments, please write to the Defense Manpower Data Center (DMDC) ATTN: Ms. Kristin Williams, 4800 Mark Center Drive, Ste 04E25, Alexandria, VA, 22350, or call at (571) 372–1102.

Title, Associated Form, and OMB Control Number: The 2012 Post-Election Survey of State and Local Election Officials; OMB Control Number 0704–0125.

Needs and Uses: The information collection requirement is necessary to fulfill the mandate of the Uniformed and Overseas Citizens Absentee Voting Act (UOCAVA of 1986 [42 U.S.C. 1973ff]). UOCAVA requires a statistical analysis report to the President and Congress on the effectiveness of assistance under the Act, a statistical analysis of voter participation, and a description of State/Federal cooperation.

Affected Public: State, Local or Tribal Government.

Annual Burden Hours: 2,000 hours.

Number of Respondents: 3,000.

Responses per Respondent: 1.

Average Burden per Response: 40 minutes.

Frequency: One time.

SUPPLEMENTARY INFORMATION:

Summary of Information Collection

UOCAVA requires the States to allow Uniformed Services personnel, their family members, and overseas citizens to use absentee registration procedures and to vote by absentee ballot in general, special, primary, and runoff elections for Federal offices. The Act covers members of the Uniformed Services and the merchant marine to include the commissioned corps of the National Oceanic and Atmospheric Administration and Public Health Service and their eligible dependents, Federal civilian employees overseas, and overseas U.S. citizens not affiliated with the Federal Government. Local Election Officials (LEO) process voter registration and absentee ballot applications, send absentee ballots to voters, and receive and process the voted ballots in counties, cities, parishes, townships and other jurisdictions within the U.S. LEOs, independently and in relation to their respective State election officicals, are often one of the most important pieces in the absentee voting process for UOCAVA citizens. The Federal Voting Assistance Program (FVAP) conducts the post-election survey of State and Local Election Officials to determine participation rates that are representative of all citizens covered by the Act, to measure State-Federal cooperation, and to evaluate the effectiveness of the overall absentee voting program. By design, the information collected be both quantitative (collected from both the State and Local Election Officials) and qualitative (collected from the Local Election Officials), and will be used for overall program evaluation, management and improvement, and to compile the congressionally-mandated report to the President and Congress.

Dated: March 2, 2012.

Patricia L. Toppings,

OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 2012–7071 Filed 3–23–12; 8:45 am]

BILLING CODE 5001–06–P

DEPARTMENT OF DEFENSE

Office of the Secretary

[Docket ID DoD–2012–OS–0039]

Proposed Reinstatement; Comment Request

AGENCY: Defense Logistics Agency, DoD.

ACTION: Notice.

SUMMARY: In compliance with Section 3506(c)(2)(A) of the *Paperwork Reduction Act of 1995,* the Defense Logistics Agency announces a proposed public information collection and seeks public comment on the provisions thereof. Comments are invited on: (a) Whether the collection of information is necessary for the proper performance of the functions of the Agency, including whether the information shall have practical utility; (b) the accuracy of the Agency's estimate of the burden of the proposed information collection; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the information collection on respondents, including through the use of automated collection techniques or other forms of information technology.

DATES: Consideration will be given to all comments received by May 25, 2012.

ADDRESSES: You may submit comments, identified by docket number and title, by any of the following methods:

• *Federal eRulemaking Portal: http://www.regulations.gov*. Follow the instructions for submitting comments.

• *Mail:* Federal Docket Management System Office, 4800 Mark Center Drive, East Tower, Suite 02G09, Alexandria, VA 22350–3100.

Instructions: All submissions received must include the agency name, docket number and title for this **Federal Register** document. The general policy for comments and other submissions from members of the public is to make these submissions available for public viewing on the Internet at *http://www.regulations.gov* as they are received without change, including any personal identifiers or contact information.

FOR FURTHER INFORMATION CONTACT: To request more information on this proposed information collection or to obtain a copy of the proposal and associated collection instruments, please write to Defense Logistics Agency, ATTN: U.S./Canada Joint Certification Office, DLA Logistics Information Service-LFT, Attn: Stephen G. Riley, Federal Center, 74 Washington Ave. N., Battle Creek, MI 49017–3084, or call (269) 961–5464.

Title; Associated Form; and OMB Number: Militarily Critical Technical Data Agreement, DD Form 2345, OMB 0704–0207.

Needs and Uses: The information collection requirement is necessary as a basis for certifying enterprises or individuals to have access to DoD export-controlled militarily critical technical data subject to the provisions of 32 CFR part 250. Enterprises and individuals that need access to unclassified DoD-controlled militarily critical technical data must certify on DD Form 2345, Militarily Critical Technical Data Agreement, that data will be used only in ways that will inhibit unauthorized access and maintain the protection afforded by U.S. export control laws. The information collected is disclosed only to the extent

consistent with prudent business practices, current regulations, and statutory requirements and is so indicated on the Privacy Act Statement of DD Form 2345.

Affected Public: Individuals or households; businesses or other for profit; not-for-profit institutions.

Annual Burden Hours: 2667.

Number of Respondents: 8,000.

Responses per Respondent: 1.

Average Burden per Response: 0.33 hours (20 minutes).

Frequency: On occasion

SUPPLEMENTARY INFORMATION:

Summary of Information Collection

Use of DD Form 2345 permits U.S. and Canada defense contractors to certify their eligibility to obtain certain unclassified technical data with military and space applications. Non-availability of this information prevents defense contractors from accessing certain restricted databases and obstructs conference attendance where restricted data will be discussed.

Dated: February 15, 2012.

Patricia Toppings,

OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 2012–7073 Filed 3–23–12; 8:45 am]

BILLING CODE 5001–06–P

DEPARTMENT OF DEFENSE

Department of the Army

[Docket ID USA–2012–0006]

Proposed Collection; Comment Request

AGENCY: Office of the Administrative Assistant to the Secretary of the Army, (OAA–AAHS), DoD.

ACTION: Notice.

SUMMARY: In compliance with Section 3506(c)(2)(A) of the *Paperwork Reduction Act of 1995,* the Department of the Army announces a proposed public information collection and seeks public comment on the provisions thereof. Comments are invited on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden of the proposed information collection; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the information collection on respondents, including through the use of automated collection techniques or other forms of information technology.

DATES: Consideration will be given to all comments received by May 25, 2012.

ADDRESSES: You may submit comments, identified by docket number and title, by any of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments.
- *Mail:* Federal Docket Management System Office, 4800 Mark Center Drive, East Tower, Suite 02G09, Alexandria, VA 22350–3100.

Instructions: All submissions received must include the agency name, docket number and title for this **Federal Register** document. The general policy for comments and other submissions from members of the public is to make these submissions available for public viewing on the Internet at *http://www.regulations.gov* as they are received without change, including any personal identifiers or contact information.

FOR FURTHER INFORMATION CONTACT: To request more information on this proposed information collection or to obtain a copy of the proposal and associated collection instruments, please write Arlington National Cemetery (ANC), Communications Director, ATTN: Kennon Artis, Arlington, Virginia 22211, or call Department of the Army reports clearance officer at (703) 428–6440.

Title, Associated Form, and OMB Number: Arlington National Cemetery Stakeholder Survey OMB Control Number 0702- TBD.

Needs and Uses: As a way to gather feedback on stakeholders' perceptions of Arlington National Cemetery (ANC) and ANC activities, the Cemetery wishes to field a biannual survey among the following stakeholder groups: Veterans, families of veterans, Congress, visitors to ANC (including families and students), veterans service organizations (VSO's) and DoD leadership commands. A trend analysis over time will help provide useful feedback and help shape future (outreach) activities and inform future choices.

Affected Public: Individual or household.

Annual Burden Hours: 765.

Number of Respondents: 7,650.

Responses per Respondent: 1.

Average Burden per Response: 6 minutes.

Frequency: Semi-annual.

SUPPLEMENTARY INFORMATION: Arlington National Cemetery (ANC) is the preeminent institution for interring our nation's heroes. ANC cares about the families (friends) of those laid to rest there. ANC represents a good destination to Explore the Nation's history. In an area of 624 acres veterans and military casualties from each of the nation's wars are interred in the cemetery ranging from the American Civil War through to the military actions in Afghanistan and Iraq.

Dated: February 15, 2012.

Patricia Toppings,

OSD Federal Register, Liaison Officer, Department of Defense.

[FR Doc. 2012–7074 Filed 3–23–12; 8:45 am]

BILLING CODE 5001–06–P

DEPARTMENT OF EDUCATION

Notice of Submission for OMB Review; Institute of Education Sciences; Quick Response Information System (QRIS) 2012–2015 System Clearance

SUMMARY: The National Center for Education Statistics (NCES) Quick Response Information System (QRIS) consists of the Fast Response Survey System (FRSS) and the Postsecondary Education Quick Information System (PEQIS). The QRIS currently conducts surveys under OMB generic clearance 1850–0733, which expires in June 2012. This submission requests approval to continue the current clearance conditions through 2015. FRSS primarily conducts surveys of the elementary/secondary sector (districts, schools) and public libraries. PEQIS conducts surveys of the postsecondary education sector.

DATES: Interested persons are invited to submit comments on or before April 25, 2012.

ADDRESSES: Written comments regarding burden and/or the collection activity requirements should be electronically mailed to *ICDocketMgr@ed.gov* or mailed to U.S. Department of Education, 400 Maryland Avenue SW., LBJ, Washington, DC 20202–4537. Copies of the proposed information collection request may be accessed from *http://edicsweb.ed.gov,* by selecting the ''Browse Pending Collections'' link and by clicking on link number 04777. When you access the information collection, click on ''Download Attachments'' to view. Written requests for information should be addressed to U.S. Department of Education, 400 Maryland Avenue SW., LBJ, Washington, DC 20202–4537. Requests may also be electronically mailed to *ICDocketMgr@ed.gov* or faxed to 202–401–0920. Please specify the complete title of the information collection and OMB Control Number when making your request.

Individuals who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339.

SUPPLEMENTARY INFORMATION: Section 3506 of the Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35) requires that Federal agencies provide interested parties an early opportunity to comment on information collection requests. The Director, Information Collection Clearance Division, Privacy, Information and Records Management Services, Office of Management, publishes this notice containing proposed information collection requests at the beginning of the Departmental review of the information collection. The Department of Education is especially interested in public comment addressing the following issues: (1) Is this collection necessary to the proper functions of the Department; (2) will this information be processed and used in a timely manner; (3) is the estimate of burden accurate; (4) how might the Department enhance the quality, utility, and clarity of the information to be collected; and (5) how might the Department minimize the burden of this collection on the respondents, including through the use of information technology. Please note that written comments received in response to this notice will be considered public records.

Title of Collection: Quick Response Information System (QRIS) 2012–2015 System Clearance.

OMB Control Number: 1850–0733.

Type of Review: Revision.

Total Estimated Number of Annual Responses: 104,004.

Total Estimated Number of Annual Burden Hours: 31,704.

Abstract: FRSS and PEQIS surveys are cleared under the QRIS generic clearance. The QRIS clearance is subject to the regular clearance process at the Office of Management and Budget (OMB) with a 60-day notice and a 30-day notice as part of the 120-day review period. Each individual FRSS or PEQIS survey is then subject to clearance process with an abbreviated clearance package, justifying the particular content of the survey, describing the sample design, the timeline for the survey activities, and the questionnaire. The review period for each individual survey is approximately 45 days, including a 30-day **Federal Register** notice period. OMB will provide comments as soon after the end of the 30-day notice period as possible. This generic clearance request is for surveys of state education agencies, school districts, schools, postsecondary institutions, and libraries. Surveys of teachers, students, commercial establishments, and households are not included in this request.

Dated: March 21, 2012.

Darrin A. King,

Director, Information Collection Clearance Division, Privacy, Information and Records Management Services, Office of Management.

[FR Doc. 2012–7185 Filed 3–23–12; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF EDUCATION

Notice of Submission for OMB Review; Institute of Education Sciences; National Assessment of Educational Progress (NAEP) 2011–13 System Clearance

SUMMARY: The National Assessment of Educational Progress (NAEP) is a federally authorized survey of student achievement at grades 4, 8, and 12 in various subject areas, such as mathematics, reading, writing, science, U.S. history, civics, geography, economics, and the arts.

DATES: Interested persons are invited to submit comments on or before April 25, 2012.

ADDRESSES: Written comments regarding burden and/or the collection activity requirements should be electronically mailed to *ICDocketMgr@ed.gov* or mailed to U.S. Department of Education, 400 Maryland Avenue SW., LBJ, Washington, DC 20202–4537. Copies of the proposed information collection request may be accessed from *http://edicsweb.ed.gov,* by selecting the ''Browse Pending Collections'' link and by clicking on link number 04829. When you access the information collection, click on ''Download Attachments'' to view. Written requests for information should be addressed to U.S. Department of Education, 400 Maryland Avenue SW., LBJ, Washington, DC 20202–4537. Requests may also be electronically mailed to *ICDocketMgr@ed.gov* or faxed to 202–401–0920. Please specify the complete title of the information collection and OMB Control Number when making your request.

Individuals who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339.

SUPPLEMENTARY INFORMATION: Section 3506 of the Paperwork Reduction Act of 1995 (44 U.S.C. chapter 35) requires that Federal agencies provide interested parties an early opportunity to comment on information collection requests. The Director, Information Collection Clearance Division, Privacy, Information and Records Management Services, Office of Management, publishes this notice containing proposed information collection requests at the beginning of the Departmental review of the information collection. The Department of Education is especially interested in public comment addressing the following issues: (1) Is this collection necessary to the proper functions of the Department; (2) will this information be processed and used in a timely manner; (3) is the estimate of burden accurate; (4) how might the Department enhance the quality, utility, and clarity of the information to be collected; and (5) how might the Department minimize the burden of this collection on the respondents, including through the use of information technology. Please note that written comments received in response to this notice will be considered public records.

Title of Collection: National Assessment of Educational Progress (NAEP) 2011–13 System Clearance.

OMB Control Number: 1850–0790.

Type of Review: Revision.

Total Estimated Number of Annual Responses: 789,350.

Total Estimated Number of Annual Burden Hours: 221,888.

Abstract: The National Assessment of Educational Progress (NAEP) is a federally authorized survey of student achievement at grades 4, 8, and 12 in various subject areas, such as mathematics, reading, writing, science, U.S. history, civics, geography, economics, and the arts. In the current legislation that reauthorized NAEP (20 U.S.C. 9622), Congress again mandated the collection of national education survey data through a national assessment program. The 2013 Wave 1 submittal contains the following questionnaires for main NAEP: (1) The grades 4, 8, and 12 core (demographic) student background questions, and (2) the grades 4 and 8 reading and mathematics subject-specific student background questionnaires.

Dated: March 21, 2012.

Darrin A. King,

Director, Information Collection Clearance Division, Privacy, Information and Records Management Services, Office of Management.

[FR Doc. 2012–7201 Filed 3–23–12; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF ENERGY

Proposed Agency Information Collection

AGENCY: U.S. Department of Energy, DOE.

ACTION: Notice and Request for OMB Review and Comment.

SUMMARY: The Department of Energy (DOE) has submitted to the Office of Management and Budget (OMB) for clearance, a proposal for collection of information under the provisions of the Paperwork Reduction Act of 1995. The proposed collection will be used to report the progress of participants in the DOE Better Buildings Challenge (BBC) program. The Better Buildings Challenge is a presidential leadership initiative intended to drive greater energy efficiency in the commercial and industrial marketplace to create cost savings and jobs. This will be accomplished by highlighting the ways participants overcome market barriers and persistent obstacles with replicable, marketplace solutions. The program will showcase real solutions and partner with industry leaders to better understand policy and technical opportunities. President Obama launched the Better Buildings Challenge on December 2, 2011.

DATES: Comments regarding this collection must be received on or before April 25, 2012. If you anticipate that you will be submitting comments, but find it difficult to do so within the period of time allowed by this notice, please advise the DOE Desk Officer at OMB of your intention to make a submission as soon as possible. The Desk Officer may be telephoned at 202–395–4650.

ADDRESSES: Written comments should be sent to the DOE Desk Officer, Office of Information and Regulatory Affairs, Office of Management and Budget, New Executive Office Building, Room 10102, 735 17th Street NW., Washington, DC 20503.

And to Monica Neukomm, 202–586–8177, *monica.neukomm@ee.doe.gov.*

FOR FURTHER INFORMATION CONTACT: Monica Neukomm, 202–586–8177, *monica.neukomm@ee.doe.gov*.

SUPPLEMENTARY INFORMATION: This information collection request contains: (1) OMB No. {''New''}; (2) Information Collection Request Title: Department of Energy Better Buildings Challenge Information Collection Request; (3) Type of Request: New collection; (4) Purpose: The collected information will be used to report the progress of participants in the DOE Better Buildings Challenge (BBC) program; (5) Annual Estimated Number of Respondents: 130; (6) Annual Estimated Number of Total Responses: 1,714; (7) Annual Estimated Number of Burden Hours: 788; (8) Annual Estimated Reporting and Recordkeeping Cost Burden: $0.

Statutory Authority: Section 421 of the Energy Independence and Security Act of 2007 (42 U.S.C. 17081); Section 911 of the Energy Policy Act of 2005, as amended (42 U.S.C. 16191).

Issued in Washington, DC, on March 20, 2012.

Maria Tikoff Vargas,

Energy Technology Specialist, Better Buildings Challenge, Office of Energy Efficiency and Renewable Energy.

[FR Doc. 2012–7192 Filed 3–23–12; 8:45 am]

BILLING CODE 6450–01–P

DEPARTMENT OF ENERGY

U.S. Energy Information Administration

Agency Information Collection Extension

AGENCY: U.S. Energy Information Administration (EIA), Department of Energy.

ACTION: Agency Information Collection Activities: Information Collection Extension; Notice and Request for Comments.

SUMMARY: The EIA intends to extend for three years, Form EIA–851A ''Domestic Uranium Production Report (Annual),'' Form EIA–851Q ''Domestic Uranium Production Report (Quarterly),'' and Form EIA–858 ''Uranium Marketing Annual Survey,'' with the Office of Management and Budget (OMB) pursuant to the Paperwork Reduction Act of 1995. Comments are invited on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology.

DATES: Comments regarding this proposed information collection must be received on or before May 25, 2012. If you anticipate difficulty in submitting comments within that period, contact the person listed in **ADDRESSES** as soon as possible.

ADDRESSES: Send comments to Douglas Bonnar. The mailing address is Department of Energy, U.S. Energy Information Administration, Attn: Douglas Bonnar, EI–23, Forrestal Building, 1000 Independence Avenue SW., Washington, DC 20585. To ensure receipt of the comments by the due date, submission by email (*douglas.bonnar@eia.gov*) is recommended. Alternatively, Douglas Bonnar may be contacted by telephone at 202–586–1085 or by fax at 202–586–3045.

FOR FURTHER INFORMATION CONTACT: Requests for additional information or copies of the forms and instructions should be directed to Douglas Bonnar at the contact information given above. Forms and instructions are also available on the Internet at: *http://www.eia.gov/survey/#uranium.*

SUPPLEMENTARY INFORMATION: This information collection request contains:

(1) OMB No. 1905–0160;

(2) *Information Collection Request Title:* Uranium Data Program;

(3) *Type of Request:* Three-year extension;

(4) *Purpose:*

The Federal Energy Administration Act of 1974 (Pub. L. 93–275, 15 U.S.C. 761 *et seq.*) and the DOE Organization Act (Pub. L. 95–91, 42 U.S.C. 7101 *et seq.*) require the EIA to carry out a centralized, comprehensive, and unified energy information program. This program collects, evaluates, assembles, analyzes, and disseminates information on energy resource reserves, production, demand, technology, and related economic and statistical information. This information is used to assess the adequacy of energy resources to meet near and longer term domestic demands.

The EIA, as part of its effort to comply with the Paperwork Reduction Act of 1995, (Pub. L. 104–13, 44 U.S.C. chapter 3501 *et seq.*), provides the general public and other Federal agencies with opportunities to comment on collections of energy information conducted by or in conjunction with the EIA. Any comments received help the EIA to prepare data requests that maximize the utility of the information collected, and to assess the burden of collection requirements on the public. The EIA will later seek approval by the Office of Management and Budget (OMB) under Section 3507(a) of the Paperwork Reduction Act of 1995.

Form EIA–851A collects annual data from the U.S. uranium industry on

uranium milling and processing, uranium feed sources, uranium mining, employment, drilling, expenditures, and uranium reserves. The data are used by Congress and the public. The data collected may appear in the following EIA publications: *Domestic Uranium Production Report—Annual, http://www.eia.gov/uranium/production/annual/; Domestic Uranium Production Report—Quarterly, http://www.eia.gov/uranium/production/quarterly/;* and *Annual Energy Review, http://www.eia.gov/totalenergy/data/annual/.*

Form EIA–851Q collects monthly data from the U.S. uranium industry on uranium production and sources (mines and other) on a quarterly basis. The data are used by Congress and the public. The data collected may appear in the following EIA publications: *Domestic Uranium Production Report—Quarterly, http://www.eia.gov/uranium/production/quarterly/; Domestic Uranium Production Report—Annual, http://www.eia.gov/uranium/production/annual/;* and *Annual Energy Review, http://www.eia.gov/totalenergy/data/annual/.*

Form EIA–858 collects annual data from the U.S. uranium market on uranium contracts, deliveries, inventories, enrichment services purchased, uranium use in fuel assemblies, feed deliveries to enrichers, and unfilled market requirements. Uranium deliveries, feed deliveries to enrichers, and unfilled market requirements are reported both for the current reporting year and for the following ten years. The data are used by Congress and the public. The data collected may appear in the following EIA publications: *Uranium Marketing Annual Report, http://www.eia.gov/uranium/marketing/; Domestic Uranium Production Report—Annual, http://www.eia.gov/uranium/production/annual/;* and *Annual Energy Review, http://www.eia.gov/totalenergy/data/annual/.*

(4a) Proposed Changes to Information Collection:

The EIA proposes the following changes:

For Form EIA–851A, EIA proposes two minor changes to clarify the instructions for Item 8, Reserve (Reasonably Assured Resource) Estimate. The proposed instructions are:

Item 8: Reserve (Reasonably Assured Resource) Estimate

For each property, provide:

State—Enter the State of the property.

Reserve (Reasonably Assured Resource) Estimates by Forward Cost Categories—Enter the reserve (reasonably assured resource) quantities for ore, grade, and pounds U_3O_8 by cost categories. For reporting purposes, EIA considers reserves and reasonably assured resources to be functionally equivalent. Do not report inferred resources.

For Form EIA–851Q, EIA purposes to collect supervisor information in addition to the responding company, the parent company, and the contact/preparer information.

For Form EIA–858, EIA proposes changes to clarify the instructions for Item 5, Uranium Feed Deliveries to U.S. and Foreign Enrichers in the Survey Year. The proposed instructions are:

Item 5. Uranium Feed Deliveries to U.S. and Foreign Enrichers in the Survey Year: Enter the country origins and associated quantity of uranium feed *shipped* to enrichment plants, indicating each country where enrichment plant is located.

(5) *Annual Estimated Number of Respondents:* 160;

(6) *Annual Estimated Number of Total Responses:* 205;

(7) *Annual Estimated Number of Burden Hours:* 1,450 hours;

(8) *Annual Estimated Reporting and Recordkeeping Cost Burden:* $0. There are no additional costs to respondents associated with the survey other than the costs associated with the burden hours.

Statutory Authority: Section 13(b) of the Federal Energy Administration Act of 1974, Pub. L. 93–275, codified at 15 U.S.C. 772(b).

Issued in Washington, DC, on March 20, 2012.

Stephanie Brown,

Director, Office of Survey Development and Statistical Integration, U.S. Energy Information Administration.

[FR Doc. 2012–7194 Filed 3–23–12; 8:45 am]

BILLING CODE 6450–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Project No. 2177–090]

Georgia Power Company; Notice of Application for Amendment of License and Soliciting Comments, Motions To Intervene, and Protests

Take notice that the following hydroelectric application has been filed with the Commission and is available for public inspection:

a. *Application Type:* Amendment of License.

b. *Project No.:* 2177–090.

c. *Date Filed:* February 10, 2012.

d. *Applicant:* Georgia Power Company.

e. *Name of Project:* Middle Chattahoochee Project.

f. *Location:* The project is located on the Chattahoochee River in Harris and Muscogee Counties, Georgia, and Lee and Russell Counties, Alabama.

g. *Filed Pursuant to:* Federal Power Act, 16 U.S.C. 791(a)–825(r).

h. *Applicant Contact:* Mr. Stan Connally, Senior Vice-President and Senior Production Officer, Southern Company Generation, 241 Ralph McGill Boulevard NE., Bin 10240, Atlanta, Georgia 30308–3374, (404) 506–7033.

i. *FERC Contact:* Kelly Houff, (202) 502–6393, *Kelly.Houff@ferc.gov.*

j. Deadline for filing comments, motions to intervene, and protests: April 19, 2012.

All documents may be filed electronically via the Internet. See 18 CFR 385.2001(a)(1)(iii) and the instructions on the Commission's Web site *http://www.ferc.gov/docs-filing/efiling.asp.* Commenters can submit brief comments up to 6,000 characters, without prior registration, using the eComment system at *http://www.ferc.gov/docs-filing/ecomment.asp.* You must include your name and contact information at the end of your comments. For assistance, please contact FERC Online Support. Although the Commission strongly encourages electronic filing, documents may also be paper-filed. To paper-file, mail an original and seven copies to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426.

The Commission's Rules of Practice and Procedure require all intervenors filing documents with the Commission to serve a copy of that document on each person whose name appears on the official service list for the project. Further, if an intervenor files comments or documents with the Commission relating to the merits of an issue that may affect the responsibilities of a particular resource agency, they must also serve a copy of the document on that resource agency.

k. Description of Application: Georgia Power Company seeks approval to construct a 615-foot-long rock and concrete weir, with top elevation of 225.5 feet, in the existing tailrace of the North Highland Dam of the Middle Chattahoochee Project. The proposed weir will act to support the tailwater elevation required to continue operating the North Highlands Development once the downstream City Mills Dam licensed by Uptown Columbus is breached. In addition, Georgia Power Company also seeks to construct a permanent access road to the weir and a staging area reserved for future plant

inspection and maintenance of the weir. The proposed action requires that Georgia Power Company move the existing project boundary downstream by 200 feet to accommodate the structure and the proposed safety signage, as well as a new positive boat barrier. With the installation of the tailrace weir, Georgia Power Company is not proposing to change current project operations, so all flows would remain the same as currently authorized by the license for the Middle Chattahoochee Project. During construction of the tailrace weir, Georgia Power Company will, for a short period, divert flows over the North Highlands spillway, not through the powerhouse.

l. A copy of the application is available for review at the Commission in the Public Reference Room or may be viewed on the Commission's Web site at *http://www.ferc.gov* using the ''eLibrary'' link. Enter the docket number (P–2177–090) excluding the last three digits in the docket number field to access the document. For assistance, contact FERC Online Support. A copy is also available for inspection and reproduction at the address in item h above.

You may also register online at *http://www.ferc.gov/docs-filing/esubscription.asp* to be notified via email of new filings and issuances related to this or other pending projects. For assistance, contact FERC Online Support.

m. Individuals desiring to be included on the Commission's mailing list should so indicate by writing to the Secretary of the Commission.

n. Comments, Protests, or Motions to Intervene: Anyone may submit comments, a protest, or a motion to intervene in accordance with the requirements of Rules of Practice and Procedure, 18 CFR 385.210, .211, .214. In determining the appropriate action to take, the Commission will consider all protests or other comments filed, but only those who file a motion to intervene in accordance with the Commission's Rules may become a party to the proceeding. Any comments, protests, or motions to intervene must be received on or before the specified comment date for the particular application.

Any filings must bear in all capital letters the title ''COMMENTS,'' ''PROTEST,'' or ''MOTION TO INTERVENE,'' as applicable, and the Project Number of the particular application to which the filing refers. A copy of any motion to intervene must also be served upon each representative of the Applicant specified in the particular application.

o. Agency Comments: Federal, state, and local agencies are invited to file comments on the described application. A copy of the application may be obtained by agencies directly from the applicant. If an agency does not file comments within the time specified for filing comments, it will be presumed to have no comments. One copy of an agency's comments must also be sent to the Applicant's representatives.

Dated: March 20, 2012.

Kimberly D. Bose,

Secretary.

[FR Doc. 2012–7154 Filed 3–23–12; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Project No. 12690–005]

Public Utility District No. 1 of Snohomish County, WA; Notice of Application Tendered for Filing With the Commission and Establishing Procedural Schedule for Licensing and Deadline for Submission of Final Amendments

Take notice that the following hydrokinetic pilot project license application has been filed with the Commission and is available for public inspection.

a. *Type of Application:* License for Pilot Project.

b. *Project No.:* 12690–005.

c. *Date Filed:* March 1, 2012.

d. *Applicant:* Public Utility District No. 1 of Snohomish County, Washington (Snohomish PUD).

e. *Name of Project:* Admiralty Inlet Pilot Tidal Project.

f. *Location:* On the east side of Admiralty Inlet in Puget Sound, Washington, about 1 kilometer west of Whidbey Island, entirely within Island County, Washington. The project would not occupy any federal lands.

g. *Filed Pursuant to:* Federal Power Act 16 U.S.C. 791(a)–828(c).

h. *Applicant Contact:* Steven J. Klein, Public Utility District of Snohomish County, Washington, P.O. Box 1107, 2320, California Street, Everett, WA 98206–1107; (425) 783–8473.

i. *FERC Contact:* David Turner (202) 502–6091.

j. This application is not ready for environmental analysis at this time.

k. With this notice, we are asking federal, state, local, and tribal agencies with jurisdiction and/or expertise with respect to environmental issues to cooperate with us in the preparation of the environmental document. Agencies who would like to request cooperating status should follow the instructions for filing described below.

All documents may be filed electronically via the Internet. See 18 CFR 385.2001(a)(1)(iii) and the instructions on the Commission's Web site *http://www.ferc.gov/docs-filing/efiling.asp*. For assistance, please contact FERC Online Support at *FERCOnlineSupport@ferc.gov* or toll free at 1–866–208–3676, or for TTY, (202) 502–8659. Although the Commission strongly encourages electronic filing, documents may also be paper-filed. To paper-file, mail an original and seven copies to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426.

l. The proposed Admiralty Inlet Pilot Tidal Project would consist of (1) two 19.7-foot-diameter Open-Centre Turbines supplied by OpenHydro Group Ltd., mounted on completely submerged gravity foundations; (2) two transmission cables, which run from the turbines to the cable termination vault; (3) two transmission cables from the cable termination vault to the proposed cable control building; (4) a proposed cable control building housing the power conditioning and monitoring equipment; (5) a transmission cable bringing power from the cable control building to an existing 12.47-kV transmission line; and (6) appurtenant facilities for operation and maintenance. The estimated average annual generation of the project is 216,000 kilowatt-hours.

m. *Locations of the Application:* A copy of the application is available for review at the Commission in the Public Reference Room or may be viewed on the Commission's Web site at *http://www.ferc.gov* using the ''eLibrary'' link. Enter the docket number excluding the last three digits in the docket number field to access the document. For assistance, contact FERC Online Support. A copy is also available for inspection and reproduction at the address in item (h) above.

n. You may also register online at *http://www.ferc.gov/docs-filing/esubscription.asp* to be notified via email of new filings and issuances related to this or other pending projects. For assistance, contact FERC Online Support.

o. Procedural Schedule:

The application will be processed according to the following preliminary Hydro Licensing Schedule. Revisions to the schedule may be made as appropriate.

Milestone	Target date
Filing of requested additional information.	April 16, 2012.
Commission issues REA notice.	April 23, 2012.
Filing of recommendations, preliminary terms and conditions, and preliminary fishway prescriptions.	May 23, 2012.
Commission issues Single EA.	July 23, 2012.
Comments on EA	August 22, 2012.

p. Final amendments to the application must be filed with the Commission no later than 30 days from the issuance date of the notice of ready for environmental analysis.

Dated: March 16, 2012.

Kimberly D. Bose,

Secretary.

[FR Doc. 2012–7150 Filed 3–23–12; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Combined Notice of Filings #2

Take notice that the Commission received the following electric corporate filings:

Docket Numbers: EC12–82–000.

Applicants: Ridgeline Alternative Energy, LLC, Wolverine Creek Goshen Interconnection LLC.

Description: Joint Application for Authorization under Section 203 of the Federal Power Act and Request for Confidential Treatment, Expedited Consideration and Waivers of Ridgeline Alternative Energy, LLC and Wolverine Creek Goshen Interconnection.

Filed Date: 3/16/12.

Accession Number: 20120316–5077.

Comments Due: 5 p.m. ET 4/6/12.

Take notice that the Commission received the following electric rate filings:

Docket Numbers: ER10–2384–001; ER10–2383–001.

Applicants: Mountain Wind Power LLC, Mountain Wind Power II LLC.

Description: Notice of Non-Material Change in Status of Mountain Wind Power, LLC, et al.

Filed Date: 3/14/12.

Accession Number: 20120314–5134.

Comments Due: 5 p.m. ET 4/4/12.

Docket Numbers: ER11–3420–004.

Applicants: Gridway Energy Corp.

Description: Supplemental Data Response to be effective 3/16/2012.

Filed Date: 3/16/12.

Accession Number: 20120316–5025.

Comments Due: 5 p.m. ET 4/6/12.

Docket Numbers: ER12–665–002.

Applicants: ITC Midwest LLC.

Description: ITC Midwest LLC submits tariff filing per 35.17(b): Amendment Filing to be effective 2/21/2012.

Filed Date: 3/16/12.

Accession Number: 20120316–5075.

Comments Due: 5 p.m. ET 4/6/12.

Docket Numbers: ER12–1275–000.

Applicants: Wisconsin Public Service Corporation.

Description: Annual PEB/PBOP Filing Wisconsin Public Service Corporation to be effective 4/1/2012.

Filed Date: 3/16/12.

Accession Number: 20120316–5019.

Comments Due: 5 p.m. ET 4/6/12.

Docket Numbers: ER12–1276–000.

Applicants: PPL EnergyPlus, LLC.

Description: Certificate of Concurrence to be effective 12/22/2011.

Filed Date: 3/16/12.

Accession Number: 20120316–5027.

Comments Due: 5 p.m. ET 4/6/12.

Docket Numbers: ER12–1277–000.

Applicants: The Legacy Energy Group, LLC.

Description: The Legacy Energy Group, LLC Market Based Rate Tariff to be effective 3/19/2012.

Filed Date: 3/16/12.

Accession Number: 20120316–5044.

Comments Due: 5 p.m. ET 4/6/12.

Docket Numbers: ER12–1278–000.

Applicants: Southern California Edison Company.

Description: Amended Letter Agreement SCE–Rising Tree Wind Farm LLC to be effective 3/17/2012.

Filed Date: 3/16/12.

Accession Number: 20120316–5048.

Comments Due: 5 p.m. ET 4/6/12.

Docket Numbers: ER12–1279–000.

Applicants: BluCo Energy LLC.

Description: Baseline Filing to be effective 3/16/2012.

Filed Date: 3/16/12.

Accession Number: 20120316–5049.

Comments Due: 5 p.m. ET 4/6/12.

Docket Numbers: ER12–1280–000.

Applicants: Wolverine Creek Energy LLC.

Description: Filing of Amended Common Facilities Agreement to be effective 3/16/2012.

Filed Date: 3/16/12.

Accession Number: 20120316–5055.

Comments Due: 5 p.m. ET 4/6/12.

Docket Numbers: ER12–1281–000.

Applicants: Wolverine Creek Goshen Interconnection LLC.

Description: Filing of Amended Common Facilities Agreement to be effective 3/16/2012.

Filed Date: 3/16/12.

Accession Number: 20120316–5057.

Comments Due: 5 p.m. ET 4/6/12.

Docket Numbers: ER12–1282–000.

Applicants: Southwest Power Pool, Inc.

Description: Southwest Power Pool, Inc. submits tariff filing per 35.13(a)(2)(iii): Revisions to Section 23—Sale or Assignment of Transmission Service & Att. A–1 to be effective 3/16/2012.

Filed Date: 3/16/12.

Accession Number: 20120316–5099.

Comments Due: 5 p.m. ET 4/6/12.

Docket Numbers: ER12–1283–000.

Applicants: Midwest Independent Transmission System Operator, Inc.

Description: Midwest Independent Transmission System Operator, Inc. submits tariff filing per 35.13(a)(2)(iii): 03–16–12 Module E–2 to be effective 10/1/2012.

Filed Date: 3/16/12.

Accession Number: 20120316–5105.

Comments Due: 5 p.m. ET 4/6/12.

The filings are accessible in the Commission's eLibrary system by clicking on the links or querying the docket number.

Any person desiring to intervene or protest in any of the above proceedings must file in accordance with Rules 211 and 214 of the Commission's Regulations (18 CFR 385.211 and 385.214) on or before 5 p.m. Eastern time on the specified comment date. Protests may be considered, but intervention is necessary to become a party to the proceeding.

eFiling is encouraged. More detailed information relating to filing requirements, interventions, protests, service, and qualifying facilities filings can be found at: *http://www.ferc.gov/docs-filing/efiling/filing-req.pdf.* For other information, call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Dated: March 16, 2012.

Nathaniel J. Davis, Sr.,

Deputy Secretary.

[FR Doc. 2012–7140 Filed 3–23–12; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Combined Notice of Filings #2

Take notice that the Commission received the following electric rate filings:

Docket Numbers: ER11–2494–002.

Applicants: Mountain Wind Power II LLC.

Description: Mountain Wind Power II LLC's Compliance Filing to be effective 12/23/2010.

Filed Date: 3/19/12.

Accession Number: 20120319–5002.

Comments Due: 5 p.m. ET 4/9/12.

Docket Numbers: ER12–41–000.

Applicants: ITC Midwest LLC.

Description: Filing of a Refund Report to be effective N/A. 0.

Filed Date: 3/19/12.

Accession Number: 20120319–5099.

Comments Due: 5 p.m. ET 4/9/12.

Docket Numbers: ER12–1113–001.

Applicants: Midwest Independent Transmission System Operator, Inc., International Transmission Company.

Description: ITC–DTE River Rouge Amendment 2 to be effective 4/17/2012.

Filed Date: 3/19/12.

Accession Number: 20120319–5048.

Comments Due: 5 p.m. ET 4/9/12.

Docket Numbers: ER12–1161–001.

Applicants: Fibrominn LLC.

Description: Fibrominn baseline eTariff with RTF to be effective 2/27/2012.

Filed Date: 3/19/12.

Accession Number: 20120319–5132.

Comments Due: 5 p.m. ET 4/9/12.

Docket Numbers: ER12–1163–001.

Applicants: ATCO Power Canada Ltd.

Description: ATCO Power Canada Limited baseline eTariff with RTF to be effective 2/27/2012.

Filed Date: 3/19/12.

Accession Number: 20120319–5126.

Comments Due: 5 p.m. ET 4/9/12.

Docket Numbers: ER12–1284–000.

Applicants: PJM Interconnection, L.L.C.

Description: Admin. Filing to Reinstate Missing Language in PJM Tariff Attach Q (V–0.1.0) to be effective 9/17/2010.

Filed Date: 3/19/12.

Accession Number: 20120319–5053.

Comments Due: 5 p.m. ET 4/9/12.

Docket Numbers: ER12–1284–001.

Applicants: PJM Interconnection, L.L.C.

Description: Admin. Filing to Reinstate Missing Language in PJM Tariff Attach Q (V–2.1.0) to be effective 1/1/2011.

Filed Date: 3/19/12.

Accession Number: 20120319–5093.

Comments Due: 5 p.m. ET 4/9/12.

Docket Numbers: ER12–1284–002.

Applicants: PJM Interconnection, L.L.C.

Description: Admin. Filing to Reinstate Missing Language in PJM Tariff Attach Q (V–3.1.0) to be effective 1/31/2011.

Filed Date: 3/19/12.

Accession Number: 20120319–5094.

Comments Due: 5 p.m. ET 4/9/12.

Docket Numbers: ER12–1284–003.

Applicants: PJM Interconnection, L.L.C.

Description: Admin. Filing to Reinstate Missing Language in PJM Tariff Attach Q (V–4.1.0) to be effective 3/1/2011.

Filed Date: 3/19/12.

Accession Number: 20120319–5103.

Comments Due: 5 p.m. ET 4/9/12.

Docket Numbers: ER12–1284–004.

Applicants: PJM Interconnection, L.L.C.

Description: Admin. Filing to Reinstate Missing Language in PJM Tariff Attach Q (V–6.1.0) to be effective 4/20/2011.

Filed Date: 3/19/12.

Accession Number: 20120319–5106.

Comments Due: 5 p.m. ET 4/9/12.

Docket Numbers: ER12–1284–005.

Applicants: PJM Interconnection, L.L.C.

Description: Admin. Filing to Reinstate Missing Language in PJM Tariff Attach Q (V–7.1.0) to be effective 4/26/2011.

Filed Date: 3/19/12.

Accession Number: 20120319–5128.

Comments Due: 5 p.m. ET 4/9/12.

Docket Numbers: ER12–1284–006.

Applicants: PJM Interconnection, L.L.C.

Description: Admin. Filing to Reinstate Missing Language in PJM Tariff Attach Q (V–8.1.0) to be effective 10/1/2011.

Filed Date: 3/19/12.

Accession Number: 20120319–5136.

Comments Due: 5 p.m. ET 4/9/12.

Docket Numbers: ER12–1284–007.

Applicants: PJM Interconnection, L.L.C.

Description: Admin. Filing to Reinstate Missing Language in PJM Tariff Attach Q (V–8.1.1) to be effective 12/13/2011.

Filed Date: 3/19/12.

Accession Number: 20120319–5137.

Comments Due: 5 p.m. ET 4/9/12.

Docket Numbers: ER12–1284–008.

Applicants: PJM Interconnection, L.L.C.

Description: Admin. Filing to Reinstate Missing Language in PJM Tariff Attach Q (V–9.1.0) to be effective 5/15/2012.

Filed Date: 3/19/12.

Accession Number: 20120319–5140.

Comments Due: 5 p.m. ET 4/9/12.

Docket Numbers: ER12–1285–000.

Applicants: Southern California Edison Company.

Description: SGIA and Distribution Service Agreement with Cascade Solar, LLC to be effective 3/20/2012.

Filed Date: 3/19/12.

Accession Number: 20120319–5107.

Comments Due: 5 p.m. ET 4/9/12.

Docket Numbers: ER12–1287–000.

Applicants: Calpine Philadelphia Inc.

Description: Notice of Cancellation to be effective 3/20/2012.

Filed Date: 3/19/12

Accession Number: 20120319–5176.

Comments Due: 5 p.m. ET 4/9/12.

Docket Numbers: ER12–1288–000.

Applicants: PJM Interconnection, L.L.C.

Description: PJM Interconnection, L.L.C. submits tariff filing per 35.13(a)(2)(iii): Queue Position V1–024/V1–025; Original Service Agreement No. 3256 to be effective 2/17/2012.

Filed Date: 3/19/12.

Accession Number: 20120319–5187.

Comments Due: 5 p.m. ET 4/9/12.

Docket Numbers: ER12–1289–000.

Applicants: The United Illuminating Company.

Description: The United Illuminating Company submits tariff filing per 35.12: Localized Costs Sharing Agreement with PSEG New Haven LLC to be effective 3/1/2012.

Filed Date: 3/19/12.

Accession Number: 20120319–5194.

Comments Due: 5 p.m. ET 4/9/12.

Take notice that the Commission received the following electric securities filings:

Docket Numbers: ES12–27–000.

Applicants: PJM Interconnection, L.L.C.

Description: Application for an Order Authorizing the Issuance of Securities of PJM Interconnection, L.L.C.

Filed Date: 3/19/12.

Accession Number: 20120319–5163

Comments Due: 5 p.m. ET 4/9/12.

The filings are accessible in the Commission's eLibrary system by clicking on the links or querying the docket number.

Any person desiring to intervene or protest in any of the above proceedings must file in accordance with Rules 211 and 214 of the Commission's Regulations (18 CFR 385.211 and 385.214) on or before 5 p.m. Eastern time on the specified comment date. Protests may be considered, but intervention is necessary to become a party to the proceeding.

eFiling is encouraged. More detailed information relating to filing requirements, interventions, protests, service, and qualifying facilities filings can be found at: *http://www.ferc.gov/docs-filing/efiling/filing-req.pdf.* For other information, call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Dated: March 19, 2012.

Nathaniel J. Davis, Sr.,

Deputy Secretary.

[FR Doc. 2012–7146 Filed 3–23–12; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Combined Notice of Filings

Take notice that the Commission has received the following Natural Gas Pipeline Rate and Refund Report filings:

Filings Instituting Proceedings

Docket Numbers: RP12–487–000
Applicants: Tuscarora Gas Transmission Company
Description: Stipulation and Agreement RP11–1823 to be effective 1/1/2012.
Filed Date: 3/15/12.
Accession Number: 20120315–5023
Comments Due: 5 p.m. ET 3/27/12

Docket Numbers: RP12–488–000
Applicants: Natural Gas Pipeline Company of America LLC
Description: Occidental Negotiated Rate Agreement to be effective 4/1/2012.
Filed Date: 3/15/12.
Accession Number: 20120315–5025
Comments Due: 5 p.m. ET 3/27/12

Docket Numbers: RP12–489–000
Applicants: Colorado Interstate Gas Company LLC
Description: CIG Non-Conforming Agreement Update Filing to be effective 4/16/2012.
Filed Date: 3/15/12
Accession Number: 20120315–5054
Comments Due: 5 p.m. ET 3/27/12

Docket Numbers: RP12–490–000
Applicants: Northwest Pipeline GP
Description: NWP 2012 Rates Stipulation and Settlement to be effective N/A.
Filed Date: 3/15/12
Accession Number: 20120315–5112
Comments Due: 5 p.m. ET 3/27/12

Docket Numbers: RP12–491–000
Applicants: Natural Gas Pipeline Company of America LLC
Description: Tenaska Negotiated Rate to be effective 3/15/2012.
Filed Date: 3/15/12
Accession Number: 20120315–5123
Comments Due: 5 p.m. ET 3/27/12

Docket Numbers: RP12–492–000
Applicants: White River Hub, LLC
Description: Change of Business Address to be effective 4/15/2012.
Filed Date: 3/15/12
Accession Number: 20120315–5133
Comments Due: 5 p.m. ET 3/27/12

Docket Numbers: RP12–493–000
Applicants: Questar Southern Trails Pipeline Company
Description: Change of Business Address to be effective 4/15/2012.
Filed Date: 3/15/12
Accession Number: 20120315–5137
Comments Due: 5 p.m. ET 3/27/12

Docket Numbers: RP12–494–000
Applicants: Questar Overthrust Pipeline Company
Description: Change of Business Address to be effective 4/15/2012.
Filed Date: 3/15/12
Accession Number: 20120315–5139
Comments Due: 5 p.m. ET 3/27/12

Docket Numbers: RP12–495–000
Applicants: Questar Pipeline Company
Description: Change of Business Address to be effective 4/15/2012.
Filed Date: 3/15/12
Accession Number: 20120315–5144
Comments Due: 5 p.m. ET 3/27/12

Docket Numbers: RP12–496–000
Applicants: El Paso Natural Gas Company
Description: Non-Conforming OPASA Filing to be effective 4/16/2012.
Filed Date: 3/16/12
Accession Number: 20120316–5116
Comments Due: 5 p.m. ET 3/28/12

Docket Numbers: RP12–497–000
Applicants: Midcontinent Express Pipeline LLC
Description: Negotiated Rate Amendment—Sawgrass to be effective 3/16/2012.
Filed Date: 3/16/12
Accession Number: 20120316–5117
Comments Due: 5 p.m. ET 3/28/12

Docket Numbers: RP12–498–000
Applicants: CenterPoint Energy Gas Transmission Company, LLC
Description: CEGT LLC—Fuel Tracker Effective May 1, 2012 to be effective 5/1/2012.
Filed Date: 3/19/12
Accession Number: 20120319–5060
Comments Due: 5 p.m. ET 4/2/12

Any person desiring to intervene or protest in any of the above proceedings must file in accordance with Rules 211 and 214 of the Commission's Regulations (18 CFR 385.211 and 385.214) on or before 5 p.m. Eastern time on the specified comment date. Protests may be considered, but intervention is necessary to become a party to the proceeding.

The filings are accessible in the Commission's eLibrary system by clicking on the links or querying the docket number.

eFiling is encouraged. More detailed information relating to filing requirements, interventions, protests, and service can be found at: *http://www.ferc.gov/docs-filing/efiling/filing-req.pdf*. For other information, call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Dated: March 19, 2012.

Nathaniel J. Davis, Sr.,

Deputy Secretary.

[FR Doc. 2012–7141 Filed 3–23–12; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Combined Notice of Filings #1

Take notice that the Commission received the following electric rate filings:

Docket Numbers: ER11–4355–002; *ER11–4178–001; ER11–4179–001; ER11–39–003*.
Applicants: Flat Water Wind Farm, LLC, Roth Rock Wind Farm, LLC, TPW Petersburg, LLC, Roth Rock North Wind Farm, LLC.
Description: Clarification of TPW Petersburg, LLC, *et al.* of Notice of Non-Material Change in Status.
Filed Date: 3/16/12.
Accession Number: 20120316–5181.
Comments Due: 5 p.m. ET 4/6/12.

Docket Numbers: ER12–1198–001.
Applicants: Solano 3 Wind LLC.
Description: Revised Application of Solano 3 Wind LLC For Order Accepting Market-Based Rate T to be effective 3/31/2012.
Filed Date: 3/16/12.
Accession Number: 20120316–5119.
Comments Due: 5 p.m. ET 4/6/12.

Docket Numbers: ER12–1202–001.
Applicants: Liberty Hill Power LLC.
Description: Liberty Hill Power LLC, FERC Electric Tariff to be effective 4/29/2012.
Filed Date: 3/16/12.
Accession Number: 20120316–5120.
Comments Due: 5 p.m. ET 4/6/12.

Docket Numbers: ER12–1241–001.
Applicants: Alabama Power Company.
Description: PowerSouth NITSA Amendment (Add Hewett DP with McVay-Scyrene Temporary DP) to be effective 3/16/2012.
Filed Date: 3/16/12.
Accession Number: 20120316–5131.
Comments Due: 5 p.m. ET 4/6/12.

Docket Numbers: ER12–1261–000.
Applicants: Cleco Power LLC.
Description: Supplemental filing to be effective N/A.
Filed Date: 3/15/12.
Accession Number: 20120315–5093.

Comments Due: 5 p.m. ET 4/5/12.

Docket Numbers: ER12–1274–000.

Applicants: Lehigh Capital, LLC.

Description: Lehigh Capital, LLC submits request for the cancellation of its status of market-based rate.

Filed Date: 3/14/12.

Accession Number: 20120316–0201.

Comments Due: 5 p.m. ET 4/4/12.

The filings are accessible in the Commission's eLibrary system by clicking on the links or querying the docket number.

Any person desiring to intervene or protest in any of the above proceedings must file in accordance with Rules 211 and 214 of the Commission's Regulations (18 CFR 385.211 and 385.214) on or before 5 p.m. Eastern time on the specified comment date. Protests may be considered, but intervention is necessary to become a party to the proceeding.

eFiling is encouraged. More detailed information relating to filing requirements, interventions, protests, service, and qualifying facilities filings can be found at: *http://www.ferc.gov/docs-filing/efiling/filing-req.pdf.* For other information, call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Dated: March 19, 2012.

Nathaniel J. Davis, Sr.,

Deputy Secretary.

[FR Doc. 2012–7145 Filed 3–23–12; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Combined Notice of Filings #1

Take notice that the Commission received the following electric corporate filings:

Docket Numbers: EC12–81–000

Applicants: Kansas City Power & Light Company

Description: Application of Kansas City Power & Light Company for Authorization under section 203 of the Federal Power Act and Request for Expedited Action.

Filed Date: 3/16/12

Accession Number: 20120316–5013

Comments Due: 5 p.m. ET 4/6/12

Take notice that the Commission received the following electric rate filings:

Docket Numbers: ER11–2604–003

Applicants: Commonwealth Chesapeake Company LLC

Description: Tariff Amendment—March 15, 2012 to be effective 5/14/2012.

Filed Date: 3/15/12

Accession Number: 20120315–5120

Comments Due: 5 p.m. ET 4/5/12

Docket Numbers: ER11–4100–003

Applicants: California Independent System Operator Corporation

Description: 2012–03–15 CAISO ER11–4100 Errata to Order 745 Compliance filing to be effective 12/15/2011.

Filed Date: 3/15/12

Accession Number: 20120315–5147

Comments Due: 5 p.m. ET 4/5/12

Docket Numbers: ER12–126–003

Applicants: Trademark Merchant Energy, LLC

Description: Compliance Filing—Market-Based Rate Tariff Amendment to be effective 5/14/2012.

Filed Date: 3/15/12

Accession Number: 20120315–5096

Comments Due: 5 p.m. ET 4/5/12

Docket Numbers: ER12–126–004; *ER10–3079–002*

Applicants: Tyr Energy, LLC, Trademark Merchant Energy, LLC

Description: Trademark Merchant Energy, LLC and Tyr Energy, LLC's Compliance Filing and Updated Market Power Analyses for the Northeast and Southeast region Southeast regions.

Filed Date: 3/15/12

Accession Number: 20120315–5173

Comments Due: 5 p.m. ET 4/5/12

Docket Numbers: ER12–1271–000

Applicants: PJM Interconnection, L.L.C.

Description: Queue Position O09; Original Service Agreement No. 3267 to be effective 2/14/2012.

Filed Date: 3/15/12

Accession Number: 20120315–5122

Comments Due: 5 p.m. ET 4/5/12

Docket Numbers: ER12–1272–000

Applicants: Orange and Rockland Utilities, Inc.

Description: O&R Undergrounding Filing to be effective 4/1/2012.

Filed Date: 3/15/12

Accession Number: 20120315–5145

Comments Due: 5 p.m. ET 4/5/12

Docket Numbers: ER12–1273–000

Applicants: PJM Interconnection, L.L.C.

Description: Queue Position W4–102; Original Service Agreement Nos. 3268 & 3269 to be effective 2/14/2012.

Filed Date: 3/15/12

Accession Number: 20120315–5146

Comments Due: 5 p.m. ET 4/5/12

The filings are accessible in the Commission's eLibrary system by clicking on the links or querying the docket number.

Any person desiring to intervene or protest in any of the above proceedings must file in accordance with Rules 211 and 214 of the Commission's Regulations (18 CFR 385.211 and 385.214) on or before 5 p.m. Eastern time on the specified comment date. Protests may be considered, but intervention is necessary to become a party to the proceeding.

eFiling is encouraged. More detailed information relating to filing requirements, interventions, protests, service, and qualifying facilities filings can be found at: *http://www.ferc.gov/docs-filing/efiling/filing-req.pdf.* For other information, call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Dated: March 16, 2012.

Nathaniel J. Davis, Sr.,

Deputy Secretary.

[FR Doc. 2012–7139 Filed 3–23–12; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[EL11–22–000, QF11–115–001, QF11–116–001, *et al.*]

Notice of Compliance Filing

	Docket Nos.
OREG 1, Inc.	EL11–22–000
OREG 2, Inc.	QF11–115–001
OREG 3, Inc.	QF11–116–001
OREG 4, Inc.	QF11–117–001
	QF11–118–001
	QF11–119–001
	QF11–120–001
	QF11–121–001
	QF11–122–001
	QF11–123–001
	QF11–124–001

Take notice that on March 19, 2012, OREG 1, Inc., OREG 2, Inc., OREG 3, Inc., and OREG 4, Inc filed compliance refund reports, pursuant to the Federal Energy Regulatory Commission's (Commission) Orders issued in this proceeding on May 19, 2011, 135 FERC ¶ 61,150 (2011), and February 16, 2012, 138 FERC ¶ 61,110 (2012) and the Notice Extending the Date to Make Refunds, issued on June 15, 2011.

Any person desiring to intervene or to protest this filing must file in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211, 385.214). Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Any person wishing to become a party must file a notice of intervention or motion to intervene, as appropriate. Such notices, motions, or

protests must be filed on or before the comment date. Anyone filing a motion to intervene or protest must serve a copy of that document on the Applicant and all the parties in this proceeding.

The Commission encourages electronic submission of protests and interventions in lieu of paper using the ''eFiling'' link at *http://www.ferc.gov.* Persons unable to file electronically should submit an original and 14 copies of the protest or intervention to the Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426.

This filing is accessible on-line at *http://www.ferc.gov,* using the ''eLibrary'' link and is available for review in the Commission's Public Reference Room in Washington, DC. There is an ''eSubscription'' link on the web site that enables subscribers to receive email notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please email *FERCOnlineSupport@ferc.gov,* or call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Comment Date: 5 p.m. Eastern Time on April 9, 2012.

Dated: March 19, 2012.

Nathaniel J. Davis, Sr.,

Deputy Secretary.

[FR Doc. 2012–7138 Filed 3–23–12; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. CP11–50–000]

PetroLogistics Natural Gas Storage Company, LLC; Notice of Availability of the Environmental Assessment for the Proposed Choctaw Hub Expansion Project

The staff of the Federal Energy Regulatory Commission (FERC or Commission) has prepared an environmental assessment (EA) for the Choctaw Hub Expansion Project (Project) proposed by PetroLogistics Natural Gas Storage, LLC (PetroLogistics) in the above-referenced docket. PetroLogistics requests authorization to build and operate high-deliverability, multi-cycle natural gas storage facilities in order to increase the total working capacity of the Choctaw Hub from 16 billion cubic feet (bcf) to 26.6 bcf. The proposed facilities would be adjacent to PetroLogistics' existing natural gas storage, compression and pipeline facilities within the Choctaw Salt Dome located approximately 4 miles northwest of the City of Plaquemine, Louisiana.

The EA assesses the potential environmental impacts of the construction and operation of the Project in accordance with the requirements of the National Environmental Policy Act of (NEPA). The FERC staff concludes that approval of the Project, with appropriate mitigating measures, would not constitute a major federal action significantly affecting the quality of the human environment.

The U.S. Army Corps of Engineers participated as a cooperating agency in the preparation of the EA. Cooperating agencies have jurisdiction by law or special expertise with respect to resources potentially affected by the proposal and participate in the NEPA analysis.

The Project includes the following:

Within the Choctaw Salt Dome

- A change in service of one existing underground storage cavern to natural gas storage: Cavern 28, currently used for commercial brine service;
- Addition of two compressor units totaling 27,000 horsepower to the existing PetroLogistics Compressor Station;
- One 0.67-mile-long, 30-inch-diameter cavern injection/withdrawal pipeline from the compressor station expansion site to the Cavern 28 wellhead (30-Inch Lateral to Cavern 28); and
- One 0.06-mile-long, 10-inch-diameter cavern injection/withdrawal pipeline extending from the 30-Inch-Lateral to Cavern 28 to the existing certificated Cavern 24 wellhead (10-Inch Lateral to Cavern 24).

Extending South From the Choctaw Salt Dome

- One 13-mile-long, 30-inch-diameter expansion header pipeline (30-Inch Expansion Header) looping PetroLogistics' existing pipelines,[1]
- One 0.90-mile-long, 20-inch-diameter pipeline to the proposed Texas Eastern Transmission, LP (TETCO) Station Expansion (20-Inch TETCO Lateral);
- One 0.11-mile-long, 12-inch-diameter interconnect pipeline to CrossTex LIG Pipeline Company's (Crosstex) existing system (12-Inch CrossTex Lateral);
- One 0.04-mile-long, 12-inch diameter interconnect pipeline to Florida Gas Transmission Company, LLC (FGT) (12-Inch FGT Lateral);
- A 0.23-acre expansion of the meter station interconnect to Bridgeline Pipeline System (Bridgeline) at Station Number (SN) 381+00 (Milepost (MP) 7.21) (Bridgeline Station Expansion);
- A 0.68-acre expansion of the existing Southern Natural Gas Company (SONAT) Station at SN 684+50 (MP 12.95) (SONAT Station Expansion);
- A 0.52-acre expansion of the TETCO Station at SN 47+74 of the 20-Inch TETCO Lateral (TETCO Station Expansion);
- A 0.05-acre expansion of the TETCO-future Gulf South Pipeline Company, LP (Gulf South) Interconnect Station at SN 384+00 (MP 7.27) (TETCO-future Gulf South Interconnect Station Expansion);
- Expansion of two valve sites on the existing PetroLogistics mainline to accommodate the 30-Inch Expansion Header, at SN 228+40 (MP 4.33) and SN 292+42 (MP 5.54) (Expanded Mainline Valve Sites 1 and 2);
- Three side valves on the 30-Inch Expansion Header for future lateral interconnects to Gulf South's, Cypress Pipeline Company's (Cypress'), and Enterprise Products Partners' (Enterprise's) natural gas systems at SN 83+50 (MP 1.58) (Cypress Valve Set); and
- A 5.5-acre non-jurisdictional electrical substation (Sawmill Substation) along with a 200-foot-long 69-kilovolt (kv) electrical supply line to Entergy LLC's (Entergy's) powerline.

The FERC staff mailed copies of the EA to federal, state, and local government representatives and agencies; elected officials; environmental and public interest groups; Native American tribes; potentially affected landowners and other interested individuals and groups; newspapers and libraries in the project area; and parties to this proceeding. In addition, the EA is available for public viewing on the FERC's Web site (*www.ferc.gov*) using the eLibrary link. A limited number of copies of the EA are available for distribution and public inspection at: Federal Energy Regulatory Commission, Public Reference Room, 888 First Street NE., Room 2A, Washington, DC 20426. (202) 502–8371.

Any person wishing to comment on the EA may do so. Your comments should focus on the potential environmental effects, reasonable alternatives, and measures to avoid or lessen environmental impacts. The more specific your comments, the more useful they will be. To ensure that the Commission has the opportunity to consider your comments prior to making its decision on this project, it is important that we receive your

[1] A pipeline loop is constructed parallel to an existing pipeline to increase capacity.

comments in Washington, DC on or before April 16, 2012.

For your convenience, there are three methods you can use to file your comments with the Commission. In all instances please reference the project docket number (CP11–50–000) with your submission. The Commission encourages electronic filing of comments and has dedicated eFiling expert staff available to assist you at (202) 502–8258 or *efiling@ferc.gov.*

(1) You can file your comments electronically using the *eComment* feature on the Commission's Web site at (*www.ferc.gov*) under the link to *Documents and Filings.* This is an easy method for submitting brief, text-only comments on a project;

(2) You can also file your comments electronically using the *eFiling* feature on the Commission's Web site (*www.ferc.gov*) under the link to *Documents and Filings.* With eFiling, you can provide comments in a variety of formats by attaching them as a file with your submission. New eFiling users must first create an account by clicking on ''*eRegister.*'' You must select the type of filing you are making. If you are filing a comment on a particular project, please select ''Comment on a Filing;'' or

(3) You can file a paper copy of your comments by mailing them to the following address: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 888 First Street NE., Room 1A, Washington, DC 20426.

Any person seeking to become a party to the proceeding must file a motion to intervene pursuant to Rule 214 of the Commission's Rules of Practice and Procedures (18 CFR 385.214).[2] Only intervenors have the right to seek rehearing of the Commission's decision. The Commission grants affected landowners and others with environmental concerns intervenor status upon showing good cause by stating that they have a clear and direct interest in this proceeding which no other party can adequately represent. Simply filing environmental comments will not give you intervenor status, but you do not need intervenor status to have your comments considered.

Additional information about the project is available from the Commission's Office of External Affairs, at (866) 208–FERC or on the FERC Web site (*www.ferc.gov*) using the eLibrary link. Click on the eLibrary link, click on ''General Search'' and enter the docket number excluding the last three digits in the Docket Number field (i.e., CP11–50). Be sure you have selected an appropriate date range. For assistance, please contact FERC Online Support at *FercOnlineSupport@ferc.gov* or toll free at (866) 208–3676, or for TTY, contact (202) 502–8659. The eLibrary link also provides access to the texts of formal documents issued by the Commission, such as orders, notices, and rulemakings.

In addition, the Commission offers a free service called eSubscription which allows you to keep track of all formal issuances and submittals in specific dockets. This can reduce the amount of time you spend researching proceedings by automatically providing you with notification of these filings, document summaries, and direct links to the documents. Go to *www.ferc.gov/esubscribenow.htm.*

Dated: March 16, 2012.

Kimberly D. Bose,

Secretary.

[FR Doc. 2012–7153 Filed 3–23–12; 8:45 am]

BILLING CODE 6717–01–P

[2] See the previous discussion on the methods for filing comments.

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Project No. 13080–003–CT]

Putnam Green Power, LLC; Notice of Availability of Environmental Assessment

In accordance with the National Environmental Policy Act of 1969 and the Federal Energy Regulatory Commission's regulations, 18 CFR Part 380 (Order No. 486, 52 FR 47879), the Office of Energy Projects has reviewed the application for exemption from licensing for the Cargill Falls Hydroelectric Project, to be located on the Quinebaug River, in the Town of Putnam in Windham County, Connecticut, and has prepared an Environmental Assessment (EA). In the EA, Commission staff analyzes the potential environmental effects of the project and conclude that issuing an exemption for the project, with appropriate environmental measures, would not constitute a major federal action significantly affecting the quality of the human environment.

A copy of the EA is on file with the Commission and is available for public inspection. The EA may also be viewed on the Commission's Web site at *http://www.ferc.gov* using the ''eLibrary'' link. Enter the docket number excluding the last three digits in the docket number field to access the document. For assistance, contact FERC Online Support at *FERCOnlineSupport@ferc.gov* or toll-free at 1–866–208–3676, or for TTY, (202) 502–8659.

You may also register online at *http://www.ferc.gov/docs-filing/esubscription.asp* to be notified via email of new filings and issuances related to this or other pending projects. For assistance, contact FERC Online Support.

For further information, contact Jeff Browning at (202) 502–8677.

Dated: March 19, 2012.

Kimberly D. Bose,

Secretary.

[FR Doc. 2012–7155 Filed 3–23–12; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. CP11–56–000]

Texas Eastern Transmission, LP, Algonquin Gas Transmission, LLC; Notice of Availability of the Final Environmental Impact Statement for the Proposed New Jersey-New York Expansion Project

The staff of the Federal Energy Regulatory Commission (FERC or Commission) has prepared a final environmental impact statement (EIS) for the New Jersey-New York Expansion Project (NJ-NY Project or Project), proposed by Texas Eastern Transmission, LP (Texas Eastern) and Algonquin Gas Transmission, LLC (Algonquin), both Spectra Energy Corporation natural gas pipeline companies, in the above-referenced docket. Texas Eastern and Algonquin request authorization to expand their natural gas pipeline systems in New Jersey, New York, and Connecticut, to deliver up to 800,000 dekatherms per day of natural gas from multiple receipt points on the Texas Eastern and Algonquin pipeline systems to new delivery points in New Jersey and New York.

The final EIS assesses the potential environmental effects of the construction and operation of the NJ-NY Project in accordance with the requirements of the National Environmental Policy Act (NEPA). The FERC staff concludes that approval of the proposed Project would have some adverse environmental impact; however, these impacts would be reduced to less-than-significant levels with the implementation of Texas Eastern's and Algonquin's proposed

mitigation and the additional measures we recommend in the EIS.

The U.S. Environmental Protection Agency (EPA), U.S. Department of Transportation, U.S. Army Corps of Engineers, New York City Mayor's Office, and New York City Department of Environmental Protection participated as cooperating agencies in the preparation of the EIS. Cooperating agencies have jurisdiction by law or special expertise with respect to resources potentially affected by the proposal and participate in the NEPA analysis. Although the cooperating agencies provided input to the conclusions and recommendations presented in the EIS, the agencies will present their own conclusions and recommendations in their respective Records of Decision for the project.

The final EIS addresses the potential environmental effects of the following project facilities:

- Construction and operation of approximately 15.2 miles of new 30-inch-diameter pipeline and 4.8 miles of 42-inch-diameter pipeline;
- Abandonment of 8.95 miles of existing 12-, 20-, and 24-inch-diameter pipeline;
- Installation of seven new metering and regulating (M&R) stations;
- Modifications to four existing compressor stations and one existing M&R station; and
- Modifications and installations of associated valves and piping.

The FERC staff mailed copies of the EIS to federal, state, and local government representatives and agencies; elected officials; environmental and public interest groups; Native American tribes; local newspapers and libraries in the Project area; intervenors to the FERC's proceeding; and potentially affected landowners and other interested individuals and groups. Paper copy versions of the EIS were mailed to those specifically requesting them; all others received a CD version. In addition, the EIS is available for public viewing on the FERC's Web site (*www.ferc.gov*) using the eLibrary link. A limited number of copies are available for distribution and public inspection at: Federal Energy Regulatory Commission, Public Reference Room, 888 First Street NE., Room 2A, Washington, DC 20426. (202) 502–8371.

In accordance with the Council on Environmental Quality's (CEQ) regulations implementing NEPA, no agency decision on a proposed action may be made until 30 days after the EPA publishes a notice of availability of the final EIS in the **Federal Register**. However, the CEQ regulations provide an exception to this rule when an agency decision is subject to a formal internal appeal process that allows other agencies or the public to make their views known. In such cases, the agency decision may be made at the same time the notice of the final EIS is published, allowing both periods to run concurrently. The Commission decision for this proposed action is subject to a 30-day rehearing period.

Questions

Additional information about the Project is available from the Commission's Office of External Affairs, at (866) 208–FERC, or on the FERC Web site (*www.ferc.gov*) using the eLibrary link. Click on the eLibrary link, click on ''General Search,'' and enter the docket number excluding the last three digits in the Docket Number field (i.e., CP11–56). Be sure you have selected an appropriate date range. For assistance, please contact FERC Online Support at *FercOnlineSupport@ferc.gov* or toll free at (866) 208–3676; for TTY, contact (202) 502–8659. The eLibrary link also provides access to the texts of formal documents issued by the Commission, such as orders, notices, and rulemakings.

In addition, the Commission offers a free service called eSubscription which allows you to keep track of all formal issuances and submittals in specific dockets. This can reduce the amount of time you spend researching proceedings by automatically providing you with notification of these filings, document summaries, and direct links to the documents. Go to *www.ferc.gov/esubscribenow.htm*.

Dated: March 16, 2012.

Kimberly D. Bose,

Secretary.

[FR Doc. 2012–7149 Filed 3–23–12; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. ER12–1291–000]

Wellhead Power Delano, LLC; Supplemental Notice That Initial Market-Based Rate Filing Includes Request for Blanket Section 204 Authorization

This is a supplemental notice in the above-referenced proceeding of Wellhead Power Delano, LLC's application for market-based rate authority, with an accompanying rate tariff, noting that such application includes a request for blanket authorization, under 18 CFR Part 34, of future issuances of securities and assumptions of liability.

Any person desiring to intervene or to protest should file with the Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426, in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214). Anyone filing a motion to intervene or protest must serve a copy of that document on the Applicant.

Notice is hereby given that the deadline for filing protests with regard to the applicant's request for blanket authorization, under 18 CFR Part 34, of future issuances of securities and assumptions of liability, is April 9, 2012.

The Commission encourages electronic submission of protests and interventions in lieu of paper, using the FERC Online links at *http://www.ferc.gov.* To facilitate electronic service, persons with Internet access who will eFile a document and/or be listed as a contact for an intervenor must create and validate an eRegistration account using the eRegistration link. Select the eFiling link to log on and submit the intervention or protests.

Persons unable to file electronically should submit an original and 14 copies of the intervention or protest to the Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426.

The filings in the above-referenced proceeding are accessible in the Commission's eLibrary system by clicking on the appropriate link in the above list. They are also available for review in the Commission's Public Reference Room in Washington, DC. There is an eSubscription link on the Web site that enables subscribers to receive email notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please email *FERCOnlineSupport@ferc.gov* or call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Dated: March 20, 2012.

Nathaniel J. Davis, Sr.,

Deputy Secretary.

[FR Doc. 2012–7144 Filed 3–23–12; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Project No. 13843–001]

Qualified Hydro 24, LLC; Notice of Intent To File License Application, Filing of Pre-Application Document, Denying Use of the Traditional Licensing Process, Commencement of Licensing Proceeding, Scoping, and Solicitation of Study Requests and Comments on the Pad

a. *Type of Filing:* Notice of Request to Use the Traditional Licensing Process.

b. *Project No.:* 13843–001.

c. *Dated Filed:* January 3, 2012.

d. *Submitted By:* Qualified Hydro 24, LLC (Qualified Hydro 24).

e. *Name of Project:* Cle Elum Dam Hydroelectric Project.

f. *Location:* On the Cle Elum River, in Kittitas County, Washington. A portion of the project occupies United States lands administered by U.S. Forest Service.

g. *Filed Pursuant to:* 18 CFR 5.3 of the Commission's regulations.

h. *Potential Applicant Contact:* Ramya Swaminathan, Qualified Hydro 24, LLC, 239 Causeway Street, Suite 300, Boston, MA 02114; (978) 283–2822.

i. *FERC Contact:* James Hastreiter at (503) 552–2760; or email at *james.hastreiter@ferc.gov*.

j. Qualified Hydro 24 filed its request to use the Traditional Licensing Process on January 3, 2012. Qualified Hydro 24 provided public notice of its request on January 27, 2012. Qualified Hydro 24's request to use the Traditional Licensing Process was denied by letter dated March 15, 2012.

k. With this notice, we are initiating informal consultation with: (a) The U.S. Fish and Wildlife Service and/or NOAA Fisheries under section 7 of the Endangered Species Act and the joint agency regulations thereunder at 50 CFR, Part 402; (b) NOAA Fisheries under section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act and implementing regulations at 50 CFR 600.920; and (c) the Washington State Historic Preservation Officer, as required by section 106, National Historical Preservation Act, and the implementing regulations of the Advisory Council on Historic Preservation at 36 CFR 800.2.

l. With this notice, we are designating Qualified Hydro 24 as the Commission's non-federal representative for carrying out informal consultation, pursuant to section 7 of the Endangered Species Act, section 305 of the Magnuson-Stevens Fishery Conservation and Management Act, and section 106 of the National Historic Preservation Act.

m. Qualified Hydro 24 filed a Pre-Application Document (PAD; including a proposed process plan and schedule) with the Commission, pursuant to 18 CFR 5.6 of the Commission's regulations.

n. A copy of the PAD is available for review at the Commission in the Public Reference Room or may be viewed on the Commission's Web site (*http://www.ferc.gov*), using the ''eLibrary'' link. Enter the docket number, excluding the last three digits in the docket number field to access the document. For assistance, contact FERC Online Support at *FERCOnlineSupport@ferc.gov* or toll free at 1–866–208–3676, or for TTY, (202) 502–8659. A copy is also available for inspection and reproduction at the address in paragraph h.

Register online at *http://www.ferc.gov/docs-filing/esubscription.asp* to be notified via email of new filing and issuances related to this or other pending projects. For assistance, contact FERC Online Support.

Dated: March 15, 2012.

Kimberly D. Bose,

Secretary.

[FR Doc. 2012–7151 Filed 3–23–12; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Project No. 14333–000]

Natural Currents Energy Services, LLC; Notice of Preliminary Permit Application Accepted for Filing and Soliciting Comments, Motions To Intervene, and Competing Applications

On December 6, 2011, Natural Currents Energy Services, LLC filed an application, pursuant to section 4(f) of the Federal Power Act, proposing to study the feasibility of the Orient Point Tidal Energy Project, which would be located on the eastern end of the Long Island Sound in Suffolk County, New York. The proposed project would not use a dam or impoundment. The sole purpose of a preliminary permit, if issued, is to grant the permit holder priority to file a license application during the permit term. A preliminary permit does not authorize the permit holder to perform any land-disturbing activities or otherwise enter upon lands or waters owned by others without the owners' express permission.

The proposed project would consist of: (1) Installation of 45 NC Sea Dragon tidal turbines at a rated capacity of 110 kilowatts, (2) an estimated 2,500 meters in length of additional transmission infrastructure, and (3) appurtenant facilities. Initial estimated production will be a minimum of 5 megawatt hours per year with the installation of 45 units.

Applicant Contact: Mr. Roger Bason, Natural Currents Energy Services, LLC, 24 Roxanne Boulevard, Highland, New York 12561, (845) 691–4009.

FERC Contact: Woohee Choi (202) 502–6336.

Deadline for filing comments, motions to intervene, competing applications (without notices of intent), or notices of intent to file competing applications: 60 days from the issuance of this notice. Competing applications and notices of intent must meet the requirements of 18 CFR 4.36. Comments, motions to intervene, notices of intent, and competing applications may be filed electronically via the Internet. See 18 CFR 385.2001(a)(1)(iii) and the instructions on the Commission's Web site *http://www.ferc.gov/docs-filing/efiling.asp.* Commenters can submit brief comments up to 6,000 characters, without prior registration, using the eComment system at *http://www.ferc.gov/docs-filing/ecomment.asp.* You must include your name and contact information at the end of your comments. For assistance, please contact FERC Online Support at *FERCOnlineSupport@ferc.gov* or toll free at 1–866–208–3676, or for TTY, (202) 502–8659. Although the Commission strongly encourages electronic filing, documents may also be paper-filed. To paper-file, mail an original and seven copies to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426.

More information about this project, including a copy of the application, can be viewed or printed on the ''eLibrary'' link of the Commission's Web site at *http://www.ferc.gov/docs-filing/elibrary.asp.* Enter the docket number (P–14333) in the docket number field to access the document. For assistance, contact FERC Online Support.

Dated: March 15, 2012.

Kimberly D. Bose,

Secretary.

[FR Doc. 2012–7152 Filed 3–23–12; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Project No. 14346–000]

Southern Energy, Inc.; Notice of Preliminary Permit Application Accepted for Filing and Soliciting Comments, Motions To Intervene, and Competing Applications

On January 11, 2012, Southern Energy, Inc. filed an application for a preliminary permit, pursuant to section 4(f) of the Federal Power Act (FPA), proposing to study the feasibility of the Walker Lake Hydroelectric Project (Walker Lake Project or project) to be located on Walker Lake, near Haines, Haines Borough, Alaska. The sole purpose of a preliminary permit, if issued, is to grant the permit holder priority to file a license application during the permit term. A preliminary permit does not authorize the permit holder to perform any land-disturbing activities or otherwise enter upon lands or waters owned by others without the owners' express permission.

The proposed project would utilize the existing Walker Lake and would consist of the following new features: (1) Two rockfilled dams approximately 15-foot-wide, 250- and 325-foot-long, respectively making usable capacity of Walker Lake to be 4,300 acre-feet at a normal maximum operating elevation of 1,195 feet mean sea level (msl); (2) a concrete spillway and diversion channel for controlled releases to Walker Creek; (3) a freestanding concrete intake and reservoir outlet works at elevation 1,170 feet msl diverting flow from the southeast dam into the penstock; (4) a 24-inch-diameter, 12,000-foot-long penstock, of which approximately 10,000 feet will be buried and 2,000 feet will be aboveground; (5) a powerhouse containing one generating unit rated for one megawatt at 780 feet of net head; (6) a 50-foot-long tailrace connecting the powerhouse with the Little Salmon River; (7) an underground 4-mile-long, 12.5-kilovolt (kV) transmission line extending from the project to a transmission line owned by Inside Passage Electric Cooperative (the point of interconnection); and (8) appurtenant facilities. The estimated annual generation of the Walker Lake Project would be 3,615 megawatt-hours.

Applicant Contact: Mr. Darrell Maple, President, Lynn Canal Professional Services, 660 S. Oregon Street, Jacksonville, Oregon, 97530; phone: (541) 261–3764.

FERC Contact: Kelly Wolcott; phone: (202) 502–6480.

Deadline for filing comments, motions to intervene, competing applications (without notices of intent), or notices of intent to file competing applications: 60 days from the issuance of this notice. Competing applications and notices of intent must meet the requirements of 18 CFR 4.36. Comments, motions to intervene, notices of intent, and competing applications may be filed electronically via the Internet. See 18 CFR 385.2001(a)(1)(iii) and the instructions on the Commission's Web site *http://www.ferc.gov/docs-filing/efiling.asp.* Commenters can submit brief comments up to 6,000 characters, without prior registration, using the eComment system at *http://www.ferc.gov/docs-filing/ecomment.asp.* You must include your name and contact information at the end of your comments. For assistance, please contact FERC Online Support at *FERCOnlineSupport@ferc.gov* or toll free at 1–866–208–3676, or for TTY, (202) 502–8659. Although the Commission strongly encourages electronic filing, documents may also be paper-filed. To paper-file, mail an original and seven copies to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426.

More information about this project, including a copy of the application, can be viewed or printed on the ''eLibrary'' link of Commission's Web site at *http://www.ferc.gov/docs-filing/elibrary.asp.* Enter the docket number (P–14346) in the docket number field to access the document. For assistance, contact FERC Online Support.

Dated: March 15, 2012.

Kimberly D. Bose,

Secretary.

[FR Doc. 2012–7148 Filed 3–23–12; 8:45 am]

BILLING CODE 6717–01–P

ENVIRONMENTAL PROTECTION AGENCY

[FRL–9650–5]

Notification of Public Teleconferences of the Science Advisory Board; Environmental Economics Advisory Committee

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: The Environmental Protection Agency (EPA) Science Advisory Board (SAB) Staff Office announces public teleconferences of the SAB Environmental Economics Advisory Committee to conduct a review of EPA's Draft White Paper ''Retrospective Study of the Costs of EPA Regulations: An Interim Report'' (March 2012).

DATES: The public teleconferences will be held on Thursday, April 19, 2012 from 11 a.m. to 3 p.m. (Eastern Daylight Time), Friday, April 20, 2012 from 11 a.m. to 3 p.m. (Eastern Daylight Time) and Thursday, July 12, 2012 from 11 a.m. to 3 p.m. (Eastern Daylight Time).

ADDRESSES: The teleconferences will be conducted by telephone only.

FOR FURTHER INFORMATION CONTACT: Any member of the public who wants further information concerning the meeting may contact Dr. Holly Stallworth, Designated Federal Officer (DFO), EPA Science Advisory Board (1400R), U.S. Environmental Protection Agency, 1300 Pennsylvania Avenue NW, Washington, DC 20460; via telephone/voice mail (202) 564–2073; fax (202) 565–2098; or email at *stallworth.holly@epa.gov.* General information concerning the SAB can be found on the EPA Web site at *http://www.epa.gov/sab.*

SUPPLEMENTARY INFORMATION:

Background: Pursuant to the Federal Advisory Committee Act (FACA), as amended, 5 U.S.C., App., notice is hereby given that the SAB Environmental Economics Advisory Committee (EEAC) will hold a public teleconferences to review the EPA draft report ''Retrospective Study of the Costs of EPA Regulations: An Interim Report'' (March 2012). The SAB was established pursuant to 42 U.S.C. 4365 to provide independent scientific and technical advice to the Administrator on the technical basis for Agency positions and regulations. The SAB is a Federal Advisory Committee chartered under FACA. The SAB will comply with the provisions of FACA and all appropriate SAB Staff Office procedural policies.

The U.S. Environmental Protection Agency (EPA) conducts benefit-cost analyses of its rules and regulations. EPA strives to use the best available information to conduct its analyses. Benefit-cost analyses are by definition predictive, relying on *ex ante* or forecasted information. To improve future benefit-cost analyses, it is important to learn how well EPA's estimates compare with actual (*ex post*) costs and, if they differ substantially, to understand why. EPA's National Center for Environmental Economics has launched a series of case studies attempting to assess compliance costs retrospectively that, if successful, could help identify reasons for any systematic differences between *ex ante* and *ex post* cost estimates. The purpose is to identify potential improvements in the way in which *ex ante* analyses are

performed. EPA's draft ''Retrospective Study of the Costs of EPA Regulations: An Interim Report'' (March 2012) summarizes the work done to date, describes the methodologies employed thus far and discusses the numerous challenges faced in conducting these analyses. The report may be found at the SAB Web site (www.epa.gov/sab and on the EPA Web site at *http://yosemite.epa.gov/ee/epa/eed.nsf/Webpages/RetroCost.html*). EPA has requested the SAB's review of its approach to assessing ex post costs as detailed in its draft paper.

Technical Contacts: Any questions concerning EPA's White Paper should be directed to Dr. Nathalie Simon, NCEE at (202) 566–2347 or *simon.nathalie@epa.gov*.

Availability of Meeting Materials: A meeting agenda, charge questions, and other materials for the teleconferences will be placed on the SAB Web site at *www.epa.gov/sab*.

Procedures for Providing Public Input: Public comment for consideration by EPA's federal advisory committees and panels has a different purpose from public comment provided to EPA program offices. Therefore, the process for submitting comments to a federal advisory committee is different from the process used to submit comments to an EPA program office. Federal advisory committees and panels, including scientific advisory committees, provide independent advice to EPA. Members of the public can submit relevant comments pertaining to the group conducting this advisory activity, EPA's charge, or meeting materials. Input from the public to the SAB will have the most impact if it consists of comments that provide specific scientific or technical information or analysis for the SAB to consider. Members of the public wishing to provide comment should contact the Designated Federal Officer for the relevant advisory committee directly. *Oral Statements:* In general, individuals or groups requesting an oral presentation at a public teleconference will be limited to five minutes per speaker. To be placed on the public speaker list for the April 19, 2012 meeting, interested parties should notify Dr. Holly Stallworth, DFO, by email no later than April 12, 2012. To be placed on the public speaker list for the July 12, 2012 teleconference, interested parties should notify Dr. Holly Stallworth by July 5, 2012. *Written Statements:* Written statements for the April 19, 2012 teleconference should be received in the SAB Staff Office by April 12, 2012 so that the information may be made available to the SAB Panel for its consideration prior to this meeting. Written statements for the July 12, 2012 teleconference should be received by July 5, 2012. Written statements should be supplied to the DFO via email (acceptable file format: Adobe Acrobat PDF, MS Word, WordPerfect, MS PowerPoint, or Rich Text files in IBM–PC/Windows 98/2000/XP format).

Accessibility: For information on access or services for individuals with disabilities, please contact Dr. Stallworth at the phone number or email address noted above, preferably at least ten days prior to the meeting, to give EPA as much time as possible to process your request.

Dated: March 14, 2012.

Vanessa T. Vu,

Director, EPA Science Advisory Board Staff Office.

[FR Doc. 2012–6924 Filed 3–23–12; 8:45 am]

BILLING CODE 6560–50–P

FEDERAL COMMUNICATIONS COMMISSION

Information Collections Being Reviewed by the Federal Communications Commission

AGENCY: Federal Communications Commission.

ACTION: Notice and request for comments.

SUMMARY: The Federal Communications Commission (FCC), as part of its continuing effort to reduce paperwork burdens, invites the general public and other Federal agencies to take this opportunity to comment on the following information collection, as required by the Paperwork Reduction Act (PRA) of 1995. Comments are requested concerning (a) whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's burden estimate; (c) ways to enhance the quality, utility, and clarity of the information collected; (d) ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology; and (e) ways to further reduce the information collection burden on small business concerns with fewer than 25 employees.

The FCC may not conduct or sponsor a collection of information unless it displays a currently valid control number. No person shall be subject to any penalty for failing to comply with a collection of information subject to the PRA that does not display a valid Office of Management and Budget (OMB) control number.

DATES: Written PRA comments should be submitted on or before May 25, 2012. If you anticipate that you will be submitting comments, but find it difficult to do so within the period of time allowed by this notice, you should advise the contact listed below as soon as possible.

ADDRESSES: Direct all PRA comments to the Federal Communications Commission via email to *PRA@fcc.gov* and *Cathy.Williams@fcc.gov*.

FOR FURTHER INFORMATION CONTACT: For additional information about the information collection, contact Cathy Williams at (202) 418–2918.

SUPPLEMENTARY INFORMATION: *OMB Control Number:* 3060–xxxx.

Title: Creation of a Low Power Radio Service and Amendment of Service and Eligibility Rules for FM Broadcast Translator Stations, Fourth Report and Order and Third Order on Reconsideration (''Fourth Report and Order''), MM Docket 99–25, MB Docket No. 07–172, RM–11338; Implementation of Application Caps.

Form Number: N/A.

Type of Review: New collection.

Respondents: Not-for-profit institutions; State, local or tribal government.

Number of Respondents and Responses: 300 respondents; 300 responses.

Estimated Time per Response: 2 hours.

Frequency of Response: One-time reporting requirement.

Total Annual Burden: 600 hours.

Total Annual Costs: None.

Obligation to Respond: Required to obtain or retain benefits. The statutory authority for this collection is contained in Sections 154(i) of the Communications Act of 1934, as amended.

Nature and Extent of Confidentiality: There is no need for confidentiality with this collection of information.

Privacy Impact Assessment(s): No impact(s).

Needs and Uses: On March 19, 2012, the Commission adopted a Fourth Report and Order and Third Order on Reconsideration (''Fourth Report and Order''), FCC 12–29. In the Fourth Report and Order, the Commission adopts the national and market-specific caps proposed in the Third Further Notice, FCC 11–105, and requires parties with more than 50 pending applications and/or more than one pending application in the markets identified in Appendix A of the Fourth

Report and Order (the top 150 Arbitron markets plus markets with more than 4 pending translator applications) to request the dismissal of applications to comply with these limits. Applicants may request such dismissal by filing a letter with the Commission (''Dismissal Letter'') identifying the applications they wish to be dismissed. In the event that an applicant does not timely comply with these dismissal procedures, the Commission staff will first apply the national cap, retaining on file the first 50 filed applications and dismissing those that were subsequently filed. The staff will then dismiss all but the first filed application in each of the markets identified in Appendix A.

OMB Control Number: 3060-xxxx.

Title: Creation of a Low Power Radio Service and Amendment of Service and Eligibility Rules for FM Broadcast Translator Stations, Fourth Report and Order and Third Order on Reconsideration (''Fourth Report and Order''), MM Docket 99–25, MB Docket No. 07–172, RM–11338; Translator Amendments and Top 50 Market Preclusion Showings.

Form Number: N/A.

Type of Review: New collection.

Respondents: Not-for-profit institutions; State, local or tribal government.

Number of Respondents and Responses: 500 respondents; 1,300 responses.

Estimated Time per Response: 2 hours.

Frequency of Response: One time reporting requirement.

Total Annual Burden: 2,600 hours.

Total Annual Costs: None.

Obligation to Respond: Required to obtain or retain benefits. The statutory authority for this collection is contained in Sections 154(i) of the Communications Act of 1934, as amended.

Nature and Extent of Confidentiality: There is no need for confidentiality with this collection of information.

Privacy Impact Assessment(s): No impact(s).

Needs and Uses: On March 19, 2012, the Commission adopted a Fourth Report and Order and Third Order on Reconsideration (''Fourth Report and Order''), FCC 12–29. It adopts the market-based dismissal policy proposed in the Third Further Notice, FCC 11–105, with certain modifications. Among other things, it gives all translator applicants a limited opportunity to amend their proposals. It holds that translator applicants in ''spectrum available'' markets may modify their proposals so long as they do not preclude any LPFM channel/point combination identified in the Bureau's study (''Spectrum Available Amendments''). It further holds that translator applicants with proposals in ''spectrum limited'' markets will be allowed to modify their proposals to eliminate their preclusive impact on any of the LPFM point/channel combinations that would be available within the grid if all translator window applications in that market were dismissed (''Spectrum Limited Amendments'') (''Spectrum Available Amendments'' and ''Spectrum Limited Amendments'' are collectively referred to herein as, ''Amendments''). In addition, any translator applicant in any top 50 spectrum limited market must demonstrate that its out-of-grid proposal would not preclude the only LPFM station licensing opportunity at that location (''Top 50 Market Preclusion Showing''). Specifically, it needs to demonstrate either that no LPFM station could be licensed at the proposed transmitter site or, if an LPFM station could be licensed at the site, that an additional channel remains available for a future LPFM station at the same site.

Federal Communications Commission.

Marlene H. Dortch,

Secretary, Office of the Secretary, Office of Managing Director.

[FR Doc. 2012–7166 Filed 3–23–12; 8:45 am]

BILLING CODE 6712–01–P

FEDERAL RESERVE SYSTEM

Agency Information Collection Activities: Announcement of Board Approval Under Delegated Authority and Submission to OMB

AGENCY: Board of Governors of the Federal Reserve System.

SUMMARY: Notice is hereby given of the final approval of a proposed information collection by the Board of Governors of the Federal Reserve System (Board) under OMB delegated authority, as per 5 CFR 1320.16 (OMB Regulations on Controlling Paperwork Burdens on the Public). Board-approved collections of information are incorporated into the official OMB inventory of currently approved collections of information. Copies of the Paperwork Reduction Act Submission, supporting statements and approved collection of information instrument(s) are placed into OMB's public docket files. The Federal Reserve may not conduct or sponsor, and the respondent is not required to respond to, an information collection that has been extended, revised, or implemented on or after October 1, 1995, unless it displays a currently valid OMB control number.

FOR FURTHER INFORMATION CONTACT: Federal Reserve Board Clearance Officer—Cynthia Ayouch—Division of Research and Statistics, Board of Governors of the Federal Reserve System, Washington, DC 20551 (202–452–3829). Telecommunications Device for the Deaf (TDD) users may contact (202–263–4869), Board of Governors of the Federal Reserve System, Washington, DC 20551.

OMB Desk Officer—Shagufta Ahmed—Office of Information and Regulatory Affairs, Office of Management and Budget, New Executive Office Building, Room 10235, 725 17th Street NW., Washington, DC 20503.

Final approval under OMB delegated authority of the extension for three years, with revision, of the following report:

Report title: Survey of Terms of Lending.

Agency form number: FR 2028A, FR 2028B, and FR 2028S.

OMB Control number: 7100–0061.

Frequency: Quarterly.

Reporters: Commercial banks and U.S. branches and agencies of foreign banks (FR 2028A and FR 2028S only).

Estimated annual reporting hours: 7,358 hours.

Estimated average hours per response: FR 2028A, 3.6 hours; FR 2028B, 1.4 hours; and FR 2028S, 0.1 hours.

Number of respondents: FR 2028A, 398; FR 2028B, 250; and FR 2028S, 567.

General description of report: This information collection is authorized by section 11(a)(2) of the Federal Reserve Act (12 U.S.C. 248(a)(2)) and is voluntary. Individual responses reported on the FR 2028A and FR 2028B are regarded as confidential under the Freedom of Information Act (5 U.S.C. 552(b)(4)).

Abstract: The Survey of Terms of Lending collects unique information concerning price and certain nonprice terms of loans made to businesses and farmers during the first full business week of the mid-month of each quarter (February, May, August, and November). The survey comprises three reporting forms: The FR 2028A, Survey of Terms of Business Lending; the FR 2028B, Survey of Terms of Bank Lending to Farmers; and the FR 2028S, Prime Rate Supplement to the Survey of Terms of Lending. The FR 2028A and FR 2028B collect detailed data on individual loans made during the survey week, and the FR 2028S collects the prime interest rate for each day of the survey from both FR 2028A and FR

2028B respondents. From these sample STL data, estimates of the terms of business loans and farm loans extended during the reporting week are constructed. The aggregate estimates for business loans are published in the quarterly E.2 release, *Survey of Terms of Business Lending,* and aggregate estimates for farm loans are published in the E.15 release, *Agricultural Finance Databook.*

Current Actions: On October 13, 2011, the Federal Reserve published a notice in the **Federal Register** (76 FR 63619) requesting public comment for 60 days on the extension, with revision, of the FR 2028ABS. The comment period for this notice expired on December 12, 2011. The Federal Reserve received one comment letter on the proposed revisions from a banking association. The commenter did not support the addition of a column to collect the Research Statistics Supervision Discount (RSSD) ID of the branch that originated each loan nor a column for the loan origination fee. The commenter stated that the data are not readily available and questioned how the data to be reported in the column for the RSSD ID would be used. The commenter also suggested deferring the implementation date of any changes until after the May 2012 survey week. After receiving this comment letter, in February 2012, the Federal Reserve consulted with several members of the banking association about the comments and discussed possible alternatives to the original proposal. After considering these alternatives, the Federal Reserve decided to modify the proposal by (1) replacing the proposed column to collect the RSSD ID of the branch that originated each loan with the state where the borrower is headquartered, (2) removing the proposed column for the loan origination fee, and (3) deferring the implementation date to the August 2012 survey week; however, banks that need additional time to program the changes would be able to report the new items as not available until the February 2013 survey week.

Board of Governors of the Federal Reserve System, March 21, 2012.

Jennifer J. Johnson,

Secretary of the Board.

[FR Doc. 2012–7147 Filed 3–23–12; 8:45 am]

BILLING CODE 6210–01–P

FEDERAL RESERVE SYSTEM

Change in Bank Control Notices; Acquisitions of Shares of a Bank or Bank Holding Company

The notificants listed below have applied under the Change in Bank Control Act (12 U.S.C. 1817(j)) and § 225.41 of the Board's Regulation Y (12 CFR 225.41) to acquire shares of a bank or bank holding company. The factors that are considered in acting on the notices are set forth in paragraph 7 of the Act (12 U.S.C. 1817(j)(7)).

The notices are available for immediate inspection at the Federal Reserve Bank indicated. The notices also will be available for inspection at the offices of the Board of Governors. Interested persons may express their views in writing to the Reserve Bank indicated for that notice or to the offices of the Board of Governors. Comments must be received not later than April 10, 2012.

A. Federal Reserve Bank of Richmond (Adam M. Drimer, Assistant Vice President) 701 East Byrd Street, Richmond, Virginia 23261–4528:

1. *U.S. Immigration Investment Center, LLC, Washington, DC, and its managing director, Mahnaz Khazen,* Saratoga, California; to acquire voting shares of HarVest Bancorp, Inc., Gaithersburg, Maryland, and thereby indirectly acquire voting shares of HarVest Bank of Maryland, Rockville, Maryland.

B. Federal Reserve Bank of Minneapolis (Jacqueline G. King, Community Affairs Officer) 90 Hennepin Avenue, Minneapolis, Minnesota 55480–0291:

1. *Sharon Bauman, Apple Valley, Minnesota; Virginia Bauman, Farmington, Minnesota; and Michael Murray, Irving, Texas,* Florence Bauman, and Russell Bauman, both of Kerkhoven, Minnesota, as individuals and members of the Bauman Family Control Group; to acquire and retain voting shares of Kerkhoven Bancshares, Inc., and thereby indirectly acquire and retain voting shares of Financial Security Bank, both in Kerkhoven, Minnesota.

Board of Governors of the Federal Reserve System, March 21, 2012.

Jennifer J. Johnson,

Secretary of the Board.

[FR Doc. 2012–7210 Filed 3–23–12; 8:45 am]

BILLING CODE 6210–01–P

FEDERAL RESERVE SYSTEM

Change in Bank Control Notices; Acquisitions of Shares of a Bank or Bank Holding Company

The notificants listed below have applied under the Change in Bank Control Act (12 U.S.C. 1817(j)) and § 225.41 of the Board's Regulation Y (12 CFR 225.41) to acquire shares of a bank or bank holding company. The factors that are considered in acting on the notices are set forth in paragraph 7 of the Act (12 U.S.C. 1817(j)(7)).

The notices are available for immediate inspection at the Federal Reserve Bank indicated. The notices also will be available for inspection at the offices of the Board of Governors. Interested persons may express their views in writing to the Reserve Bank indicated for that notice or to the offices of the Board of Governors. Comments must be received not later than April 9, 2012.

A. Federal Reserve Bank of Chicago (Colette A. Fried, Assistant Vice President) 230 South LaSalle Street, Chicago, Illinois 60690–1414:

1. *Steven D. Spector, Glenview, Illinois, as an individual and as trustee of the Alan L. Spector GST Family Trust, the Walter W. Spector, Steven D. Spector, Andrew M. Spector, and Nancy S. Spector Dynasty Trusts, and two Phillip J. Spector GST Trusts and as a group acting in concert with Steven D. Spector, Walter W. Spector Saratoga, California, Andrew M. Spector, Bexley, Ohio, Nancy S. Spector, Chicago, Illinois, the Phillip J. Spector GST Trust—FBO Michael Spector, Michael Spector, Bettendorf, Iowa, and Steven Spector trustees, the Phillip J. Spector GST Trust—FBO Shelley Caesar, Shelley Caesar Fox River Grove, Illinois, and Steven D. Spector trustees, and the Alan L. Spector GST Family Trust, the Walter W. Spector Dynasty Trust, the Steven D. Spector Dynasty Trust, the Andrew M. Spector Dynasty Trust, the Nancy S. Spector Dynasty Trust (Steven D. Spector trustee)* to acquire additional shares of Spector Properties, Inc., Chicago, Illinois and thereby indirectly acquire/retain control of Andalusia Community Bank, Andalusia, Illinois.

2. *Winifred J. Marquart, Herbert F. Johnson III, Samuel C. Johnson III, Odinn R. Johnson, Olivia S. Johnson, Conrad W. Leipold, Samuel C. Leipold, Michael D. Marquart, Samantha G. Marquart, and Isabelle C. Marquart, as trustee or shareholder for various Johnson family trusts and companies all of Racine, Wisconsin,* as a group acting in concert to retain control of Johnson Financial Group, Inc., Racine,

Wisconsin, and thereby indirectly control Johnson Bank, Racine, Wisconsin.

Board of Governors of the Federal Reserve System, March 20, 2012.

Jennifer J. Johnson,

Secretary of the Board.

[FR Doc. 2012–7114 Filed 3–23–12; 8:45 am]

BILLING CODE 6210–01–P

FEDERAL RESERVE SYSTEM

Formations of, Acquisitions by, and Mergers of Bank Holding Companies

The companies listed in this notice have applied to the Board for approval, pursuant to the Bank Holding Company Act of 1956 (12 U.S.C. 1841 *et seq.*) (BHC Act), Regulation Y (12 CFR part 225), and all other applicable statutes and regulations to become a bank holding company and/or to acquire the assets or the ownership of, control of, or the power to vote shares of a bank or bank holding company and all of the banks and nonbanking companies owned by the bank holding company, including the companies listed below.

The applications listed below, as well as other related filings required by the Board, are available for immediate inspection at the Federal Reserve Bank indicated. The application also will be available for inspection at the offices of the Board of Governors. Interested persons may express their views in writing on the standards enumerated in the BHC Act (12 U.S.C. 1842(c)). If the proposal also involves the acquisition of a nonbanking company, the review also includes whether the acquisition of the nonbanking company complies with the standards in section 4 of the BHC Act (12 U.S.C. 1843). Unless otherwise noted, nonbanking activities will be conducted throughout the United States.

Unless otherwise noted, comments regarding each of these applications must be received at the Reserve Bank indicated or the offices of the Board of Governors not later than April 19, 2012.

A. Federal Reserve Bank of San Francisco (Kenneth Binning, Vice President, Applications and Enforcement) 101 Market Street, San Francisco, California 94105–1579:

1. *CU Bancorp, Encino, California* to become a bank holding company by acquiring 100 percent of California United Bank, also of Encino. CU Bancorp also has applied to acquire Premier Commercial Bancorp, and thereby indirectly acquire Premier Commercial Bank, N.A., both of Anaheim, California.

Board of Governors of the Federal Reserve System, March 20, 2012.

Jennifer J. Johnson,

Secretary of the Board.

[FR Doc. 2012–7113 Filed 3–23–12; 8:45 am]

BILLING CODE 6210–01–P

FEDERAL RESERVE SYSTEM

Notice of Proposals To Engage in or To Acquire Companies Engaged in Permissible Nonbanking Activities

The companies listed in this notice have given notice under the Home Owners' Loan Act (HOLA) (12 U.S.C. 1461 *et seq.*), and Regulation LL (12 CFR part 238) or Regulation MM (12 CFR part 239) to engage *de novo,* or to acquire or control voting securities or assets of a company, including the companies listed below, that engages either directly or through a subsidiary or other company, in a nonbanking activity that is described in §§ 238.53 or 238.54 of Regulation LL (12 CFR 238.53 or 238.54) or § 239.8 of Regulation MM (12 CFR 239.8). Unless otherwise noted, these activities will be conducted throughout the United States.

Each notice is available for inspection at the Federal Reserve Bank indicated. The notice also will be available for inspection at the offices of the Board of Governors. Interested persons may express their views in writing on the question whether the proposal complies with the standards of section 10a(c)(4)(B) of HOLA (12.U.S.C. 1467a(c)(4)(B)).

Unless otherwise noted, comments regarding the applications must be received at the Reserve Bank indicated or the offices of the Board of Governors not later than April 19, 2012.

A. Federal Reserve Bank of Richmond (Adam M. Drimer, Assistant Vice President) 701 East Byrd Street, Richmond, Virginia 23261–4528:

1. *HomeTrust Bancshares, Inc., Clyde, North Carolina,* to become a savings and loan holding company upon the conversion of HomeTrust Bank, Clyde, North Carolina, from a mutual to stock form.

Board of Governors of the Federal Reserve System, March 20, 2012.

Jennifer J. Johnson,

Secretary of the Board.

[FR Doc. 2012–7115 Filed 3–23–12; 8:45 am]

BILLING CODE 6210–01–P

FEDERAL TRADE COMMISSION

[Docket No. 9351]

Star Pipe Products, Ltd.; Analysis of Proposed Consent Order To Aid Public Comment

AGENCY: Federal Trade Commission.

ACTION: Proposed consent agreement.

SUMMARY: The consent agreement in this matter settles alleged violations of federal law prohibiting unfair or deceptive acts or practices or unfair methods of competition. The attached Analysis to Aid Public Comment describes both the allegations in the complaint and the terms of the consent order—embodied in the consent agreement—that would settle these allegations.

DATES: Comments must be received on or before April 20, 2012.

ADDRESSES: Interested parties may file a comment online or on paper, by following the instructions in the Request for Comment part of the **SUPPLEMENTARY INFORMATION** section below. Write ''Star Pipe, Docket No. 9351'' on your comment, and file your comment online at *https://ftcpublic.commentworks.com/ftc/starconsent,* by following the instructions on the web-based form. If you prefer to file your comment on paper, mail or deliver your comment to the following address: Federal Trade Commission, Office of the Secretary, Room H–113 (Annex D), 600 Pennsylvania Avenue NW., Washington, DC 20580.

FOR FURTHER INFORMATION CONTACT: Linda M. Holleran (202–326–2267), FTC, Bureau of Competition, 600 Pennsylvania Avenue NW., Washington, DC 20580.

SUPPLEMENTARY INFORMATION: Pursuant to section 6(f) of the Federal Trade Commission Act, 38 Stat. 721, 15 U.S.C. 46(f), and 3.25(f) the Commission Rules of Practice, 16 CFR 3.25(f), notice is hereby given that the above-captioned consent agreement containing a consent order to cease and desist, having been filed with and accepted, subject to final approval, by the Commission, has been placed on the public record for a period of thirty (30) days. The following Analysis to Aid Public Comment describes the terms of the consent agreement, and the allegations in the complaint. An electronic copy of the full text of the consent agreement package can be obtained from the FTC Home Page (for March 20, 2012), on the World Wide Web, at *http://www.ftc.gov/os/actions.shtm.* A paper copy can be obtained from the FTC Public Reference

Room, Room 130–H, 600 Pennsylvania Avenue NW, Washington, DC 20580, either in person or by calling (202) 326–2222.

You can file a comment online or on paper. For the Commission to consider your comment, we must receive it on or before April 20, 2012. Write ''Star Pipe, Docket No. 9351'' on your comment. Your comment—including your name and your state—will be placed on the public record of this proceeding, including, to the extent practicable, on the public Commission Web site, at *http://www.ftc.gov/os/publiccomments.shtm.* As a matter of discretion, the Commission tries to remove individuals' home contact information from comments before placing them on the Commission Web site.

Because your comment will be made public, you are solely responsible for making sure that your comment does not include any sensitive personal information, like anyone's Social Security number, date of birth, driver's license number or other state identification number or foreign country equivalent, passport number, financial account number, or credit or debit card number. You are also solely responsible for making sure that your comment does not include any sensitive health information, like medical records or other individually identifiable health information. In addition, do not include any ''[t]rade secret or any commercial or financial information which is obtained from any person and which is privileged or confidential,'' as provided in Section 6(f) of the FTC Act, 15 U.S.C. 46(f), and FTC Rule 4.10(a)(2), 16 CFR 4.10(a)(2). In particular, do not include competitively sensitive information such as costs, sales statistics, inventories, formulas, patterns, devices, manufacturing processes, or customer names.

If you want the Commission to give your comment confidential treatment, you must file it in paper form, with a request for confidential treatment, and you have to follow the procedure explained in FTC Rule 4.9(c), 16 CFR 4.9(c).[1] Your comment will be kept confidential only if the FTC General Counsel, in his or her sole discretion, grants your request in accordance with the law and the public interest.

Postal mail addressed to the Commission is subject to delay due to heightened security screening. As a result, we encourage you to submit your comments online. To make sure that the Commission considers your online comment, you must file it at *https://ftcpublic.commentworks.com/ftc/starconsent* by following the instructions on the web-based form. If this Notice appears at *http://www.regulations.gov/#!home,* you also may file a comment through that Web site.

If you file your comment on paper, write ''Star Pipe, Docket No. 9351'' on your comment and on the envelope, and mail or deliver it to the following address: Federal Trade Commission, Office of the Secretary, Room H–113 (Annex D), 600 Pennsylvania Avenue NW., Washington, DC 20580. If possible, submit your paper comment to the Commission by courier or overnight service.

Visit the Commission Web site at *http://www.ftc.gov* to read this Notice and the news release describing it. The FTC Act and other laws that the Commission administers permit the collection of public comments to consider and use in this proceeding as appropriate. The Commission will consider all timely and responsive public comments that it receives on or before April 20, 2012. You can find more information, including routine uses permitted by the Privacy Act, in the Commission's privacy policy, at *http://www.ftc.gov/ftc/privacy.htm.*

Analysis of Agreement Containing Consent Order To Aid Public Comment

The Federal Trade Commission (''Commission: or ''FTC'') has accepted, subject to final approval, an agreement containing a proposed consent order (''Agreement'') from Star Pipe Products, Ltd. (''Star''). The Agreement seeks to resolve in part an administrative complaint issued by the Commission on January 4, 2012. The complaint charges that Star and certain of its competitors violated Section 5 of the Federal Trade Commission Act, 15 U.S.C. 45, by engaging in collusive acts and practices in the market for ductile iron pipe fittings (''DIPF'').

The Commission anticipates that, with regard to Star, the competitive issues described in the complaint will be resolved by accepting the proposed order, subject to final approval, contained in the Agreement. The Agreement has been placed on the public record for 30 days for receipt of comments from interested members of the public. Comments received during this period will become part of the public record. After 30 days, the Commission will again review the Agreement and any comments received, and will decide whether it should withdraw from the Agreement or make final the proposed order contained in the Agreement.

The purpose of this Analysis to Aid Public Comment is to invite and facilitate public comment concerning the proposed order. It is not intended to constitute an official interpretation of the Agreement and proposed order or in any way to modify its terms.

The proposed order is for settlement purposes only and does not constitute an admission by Star that it violated the law, or that the facts alleged in the complaint, other than jurisdictional facts, are true.

I. The Complaint

The following allegations are taken from the complaint and publicly available information.

A. Background

The largest sellers of DIPF in the United States are Star, McWane, Inc. (''McWane''), and Sigma Corporation (''Sigma''). DIPF are used in municipal water distribution systems to change pipe diameter or pipeline direction. There are no widely available substitutes for DIPF. Both imported and domestically produced DIPF are commercially available.

DIPF suppliers distribute these products through wholesale distributors, known as waterworks distributors, which specialize in distributing products for water infrastructure projects. The end users of DIPF are typically municipal and regional water authorities.

DIPF prices are based off of published list prices and discounts, with customers negotiating additional discounts off of those list prices and discounts on a transaction-by-transaction basis. DIPF suppliers also offer volume rebates.

B. Challenged Conduct

Between January 2008 and January 2009, Star allegedly conspired with McWane and Sigma to increase the prices at which DIPF were sold in the United States. In furtherance of the conspiracy, and at the request of McWane, Star changed its business methods to make it easier to coordinate price levels, first by limiting the discretion of regional sales personnel to offer price discounts, and later by exchanging information documenting the volume of its monthly sales, along with sales by McWane and Sigma, through an entity known as the Ductile Iron Fittings Research Association (''DIFRA'').

[1] In particular, the written request for confidential treatment that accompanies the comment must include the factual and legal basis for the request, and must identify the specific portions of the comment to be withheld from the public record. *See* FTC Rule 4.9(c), 16 CFR 4.9(c).

II. Legal Analysis

The January and June 2008 price restraints among Star, McWane, and Sigma alleged in the complaint are naked restraints on competition that are *per se* unlawful.[2]

The June 2008 agreement, which was allegedly reached after a public invitation to collude by McWane, illustrates how price fixing agreements may be reached in public. Here, McWane's invitation to collude was conveyed in a letter sent to waterworks distributors, the common customers of Star, McWane, and Sigma. McWane's letter contained a section that was meaningless to waterworks distributors, but was intended to inform Star and Sigma of the terms on which McWane desired to fix prices.[3]

The DIFRA information exchange was a component of the illegal price fixing agreement. Specifically, the complaint alleges that the DIFRA information exchange played a critical role in the 2008 price fixing conspiracy, first as the *quid pro quo* for a price increase by McWane in June 2008, and then by enabling Star, McWane, and Sigma to monitor each others' adherence to the collusive arrangement through the second half of 2008.

Evaluated apart from the price fixing conspiracy, Star's participation in the information exchange is an independent violation of the antitrust laws because this concerted action facilitated price coordination among the three competitors.[4]

III. The Proposed Order

The proposed order is designed to remedy the unlawful conduct charged against Star in the complaint and to prevent the recurrence of such conduct.

Paragraph II.A of the proposed order prohibits Star from participating in or maintaining any combination or conspiracy between any competitors to fix, raise or stabilize the prices at which DIPF are sold in the United States, or to allocate or divide markets, customers, or business opportunities.

Paragraph II.B of the proposed order prohibits Star from soliciting or inviting any competitor to participate in any of the actions prohibited in Paragraphs II.A.

Paragraph II.C of the proposed order prohibits Star from participating in or facilitating any agreement between competitors to exchange ''Competitively Sensitive Information'' (''CSI''), defined as certain types of information related to the cost, price, output or customers of or for DIPF. Paragraph II.D of the proposed order prohibits Star from unilaterally disclosing CSI to a competitor, except as part of the negotiation of a joint venture, license or acquisition, or in certain other specified circumstances. Paragraph II.E of the proposed order prohibits Star from attempting to engage in any of the activities prohibited by Paragraphs II.A, II.B, II.C, or II.D.

The prohibitions on Star's communication of CSI with competitors contained in Paragraphs II.C and II.D of the proposed order are subject to a proviso that permits Star to communicate CSI to its competitors under certain circumstances. Under the proposed order, Star may participate in an information exchange with its competitors in the DIPF market provided that the information exchange is structured in such a way as to minimize the risk that it will facilitate collusion among Star and its competitors. Specifically, the proposed order requires any exchange of CSI to occur no more than twice yearly, and to involve the exchange of aggregated information more than six months old. In addition, the aggregated information that is exchanged must be made publicly available, which increases the likelihood that an information exchange involving Star will simultaneously benefit consumers. The proposed order also prohibits Star's participation in an exchange of CSI involving price, cost or total unit cost of or for DIPF when the individual or collective market shares of the competitors seeking to participate in an information exchange exceed specified thresholds. The rationale for this provision is that in a highly concentrated market the risk that the information exchange may facilitate collusion is high. Due to the highly concentrated state of the DIPF market as currently structured, an information exchange involving Star and relating to price, output or total unit cost of or for DIPF is unlikely to reoccur in the foreseeable future.

Paragraph III of the proposed order requires Star to cooperate with Commission staff in the still-pending administrative litigation against McWane.

The proposed order has a term of 20 years.

By direction of the Commission.

Donald S. Clark,

Secretary.

[FR Doc. 2012–7234 Filed 3–23–12; 8:45 am]

BILLING CODE 6750–01–P

[2] Federal Trade Commission & United States Department of Justice, Antitrust Guidelines for Collaboration Among Competitors (''Competitor Collaboration Guidelines'') § 1.2 (2000); *In re North Texas Specialty Physicians,* 140 F.T.C. 715, 729 (2005) (''We do not believe that the per se condemnation of naked restraints has been affected by anything said either in *California Dental or Polygram''*).

[3] Because McWane's communication informed its rivals of the terms of price coordination desired by McWane without containing any information for customers, this communication had no legitimate business justification. *See In re Petroleum Products Antitrust Litig.,* 906 F.2d 432, 448 (9th Cir. 1990) (public communications may form the basis of an agreement on price levels when ''the public dissemination of such information served little purpose other than to facilitate interdependent or collusive price coordination'').

[4] The Commission articulated a safe harbor for exchanges of price and cost information in Statement 6 of the 1996 Health Care Guidelines. *See* Dep't of Justice & Federal Trade Comm'n, Statements of Antitrust Enforcement Policy in Health Care, Statement 6: Enforcement Policy on Provider Participation in Exchanges of Price and Cost Information (1996). The DIFRA information exchange failed to qualify for the safety zone of the Health Care Guidelines for several reasons. Although the DIFRA information exchange was managed by a third party, the information exchanged was insufficiently historical, the participants in the exchange too few, and their individual market shares too large to qualify for the permissive treatment contemplated by the Health Care Guidelines. While failing to qualify for the safety zone of the Health Care Guidelines is not in itself a violation of Section 5, firms that wish to minimize the risk of antitrust scrutiny should consider structuring their collaborations in accordance with the criteria of the safety zone.

GENERAL SERVICES ADMINISTRATION

[OMB Control No. 3090–0262; Docket 2012–0001; Sequence 3]

General Services Administration Acquisition Regulation; Information Collection; Identification of Products With Environmental Attributes

AGENCY: Office of Acquisition Policy, GSA.

ACTION: Notice of request for comments regarding a extension of a previously existing OMB clearance.

SUMMARY: Under the provisions of the Paperwork Reduction Act the Regulatory Secretariat will be submitting to the Office of Management and Budget (OMB) a request to review and approve an extension of a previously approved information collection requirement regarding identification of products with environmental attributes.

Public comments are particularly invited on: Whether this collection of information is necessary and whether it will have practical utility; whether our estimate of the public burden of this collection of information is accurate and based on valid assumptions and methodology; and ways to enhance the quality, utility, and clarity of the information to be collected.

DATES: Submit comments on or before: May 25, 2012.

FOR FURTHER INFORMATION CONTACT: Ms. Dana Munson, Procurement Analyst, General Services Acquisition Policy Division, GSA, at telephone (202) 357–9652 or via email to *dana.munson@gsa.gov.*

ADDRESSES: Submit comments identified by Information Collection 3090–0262, Identification of Products with Environmental Attributes, by any of the following methods:

- *Regulations.gov: http://www.regulations.gov.* Submit comments via the Federal eRulemaking portal by inputting ''Information Collection 3090–0262, Identification of Products with Environmental Attributes'', under the heading ''Enter Keyword or ID'' and selecting ''Search''. Select the link ''Submit a Comment'' that corresponds with ''Information Collection 3090–0262, Identification of Products with Environmental Attributes''. Follow the instructions provided at the ''Submit a Comment'' screen. Please include your name, company name (if any), and ''Information Collection 3090–0262, Identification of Products with Environmental Attributes'' on your attached document.
- *Fax:* 202–501–4067.
- *Mail:* General Services Administration, Regulatory Secretariat (MVCB), 1275 First Street NE., Washington, DC 20417. Attn: Hada Flowers/IC 3090–0262, Identification of Products with Environmental Attributes.

Instructions: Please submit comments only and cite Information Collection 3090–0262, Identification of Products with Environmental Attributes, in all correspondence related to this collection. All comments received will be posted without change to *http://www.regulations.gov,* including any personal and/or business confidential information provided.

SUPPLEMENTARY INFORMATION:

A. Purpose

General Services Administration (GSA) requires contractors submitting Multiple Award Schedule Contracts to identify in their GSA price lists those products that they market commercially that have environmental attributes. The identification of these products will enable Federal agencies to maximize the use of these products to meet the responsibilities expressed in statutes and executive orders.

B. Annual Reporting Burden

Respondents: 9,000.
Responses per Respondent: 1.
Annual Responses: 9,000.
Hours per Response: 3.
Total Burden Hours: 27,000.

Obtaining Copies of Proposals: Requesters may obtain a copy of the information collection documents from the Regulatory Secretariat Division (MVCB), 1275 First Street NE., Washington, DC 20417, telephone (202) 501–4755. Please cite OMB Control No. 3090–0262, Identification of Products with Environmental Attributes, in all correspondence.

Dated: March 19, 2012.

Joseph A. Neurauter,

Director, Office of Acquisition Policy, Senior Procurement Executive.

[FR Doc. 2012–7197 Filed 3–23–12; 8:45 am]

BILLING CODE 6820–61–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Administration on Aging

Agency Information Collection Activities; Submission for OMB Review; Comment Request; State Annual Long-Term Care Ombudsman Report and Instructions

AGENCY: Administration on Aging, HHS.

ACTION: Notice.

SUMMARY: The Administration on Aging (AoA) is announcing that the proposed collection of information listed below has been submitted to the Office of Management and Budget (OMB) for review and clearance under the Paperwork Reduction Act of 1995.

DATES: Submit written comments on the collection of information by April 25, 2012.

ADDRESSES: Submit written comments on the collection of information by fax 202.395.6974 or by mail to the Office of Information and Regulatory Affairs, OMB, New Executive Office Bldg., 725 17th St. NW., Rm. 10235, Washington, DC 20503, Attn: Brenda Aguilar, Desk Officer for AoA.

FOR FURTHER INFORMATION CONTACT: Louise Ryan, telephone: (202) 357–3503; email: *louise.ryan@aoa.hhs.gov.*

SUPPLEMENTARY INFORMATION: In compliance with 44 U.S.C. 3507, AoA has submitted the following proposed collection of information to OMB for review and clearance.

States provide the following data and narrative information in the report:

1. Numbers and descriptions of cases filed and complaints made on behalf of long-term care facility residents to the statewide ombudsman program;
2. Major issues identified impacting on the quality of care and life of long-term care facility residents;
3. Statewide program operations; and
4. Ombudsman activities in addition to complaint investigation.

The report form and instructions have been in continuous use, with minor modifications, since they were first approved by OMB for the FY 1995 reporting period. This request is for approval to extend use of the current form and instructions, with no modifications, for three years, covering the FY 2012–2014 reporting periods.

The data collected on complaints filed with ombudsman programs and narrative on long-term care issues provide information to Centers for Medicare and Medicaid Services and others on patterns of concerns and major long-term care issues affecting residents of long-term care facilities. Both the complaint and program data collected assist the states and local ombudsman programs in planning strategies and activities, providing training and technical assistance and developing performance measures.

A reporting form and instructions may be viewed in the ombudsman section of the AoA Web site, *www.aoa.gov.*

AoA estimates the burden of this collection and entering the report information as follows: Approximately 8,569 hours, with 52 State Agencies on Aging responding annually.

Dated: March 2, 2012.

Kathy Greenlee,

Assistant Secretary for Aging.

[FR Doc. 2012–7219 Filed 3–23–12; 8:45 am]

BILLING CODE 4154–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2011–N–0624]

Agency Information Collection Activities; Submission for Office of Management and Budget Review; Comment Request; Notice of Participation

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice.

SUMMARY: The Food and Drug Administration (FDA) is announcing that a proposed collection of information has been submitted to the Office of Management and Budget (OMB) for review and clearance under the Paperwork Reduction Act of 1995.

DATES: Fax written comments on the collection of information by April 25, 2012.

ADDRESSES: To ensure that comments on the information collection are received, OMB recommends that written comments be faxed to the Office of Information and Regulatory Affairs, OMB, Attn: FDA Desk Officer, FAX: 202–395–7285, or emailed to *oira_submission@omb.eop.gov.* All comments should be identified with the OMB control number 0910–0191. Also include the FDA docket number found in brackets in the heading of this document.

FOR FURTHER INFORMATION CONTACT: Ila S. Mizrachi, Office of Information Management, Food and Drug Administration, 1350 Piccard Dr., PI50–400B, Rockville, MD 20850, 301–796–7726, *Ila.Mizrachi@fda.hhs.gov.*

SUPPLEMENTARY INFORMATION: In compliance with 44 U.S.C. 3507, FDA has submitted the following proposed collection of information to OMB for review and clearance.

Notice of Participation—21 CFR 12.45 (OMB Control Number 0910–0191)—Extension

Section 12.45 (21 CFR 12.45), issued under section 701 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 371), sets forth the format and procedures for any interested person to file a petition to participate in a formal evidentiary hearing, either personally or through a representative. Section 12.45 requires that any person filing a notice of participation state their specific interest in the proceedings, including the specific issues of fact about which the person desires to be heard. This section also requires that the notice include a statement that the person will present testimony at the hearing and will comply with specific requirements in 21 CFR 12.85, or, in the case of a hearing before a Public Board of Inquiry, concerning disclosure of data and information by participants (21 CFR 13.25). In accordance with § 12.45(e), the presiding officer may omit a participant's appearance.

The presiding officer and other participants will use the collected information in a hearing to identify specific interests to be presented. This preliminary information serves to expedite the pre-hearing conference and commits participation.

The respondents are individuals or households, State or local governments, not-for-profit institutions and businesses, or other for-profit groups and institutions.

In the **Federal Register** of September 9, 2011 (76 FR 55918), FDA published a 60-day notice requesting public comment on the proposed collection of information. No comments were received.

TABLE 1—ESTIMATED ANNUAL REPORTING BURDEN [1]

21 CFR Section	Number of respondents	Number of responses per respondent	Total annual responses	Average burden per response	Total hours
12.45	4	1	4	3	12

[1] There are no capital costs or operating and maintenance costs associated with this collection of information.

The burden estimates for this collection of information are based on Agency records and experience over the past 3 years.

Dated: March 20, 2012.

Leslie Kux,

Acting Assistant Commissioner for Policy.

[FR Doc. 2012–7137 Filed 3–23–12; 8:45 am]

BILLING CODE 4160–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2011–N–0776]

Agency Information Collection Activities; Submission for Office of Management and Budget Review; Comment Request; Reclassification Petitions for Medical Devices

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice.

SUMMARY: The Food and Drug Administration (FDA) is announcing that a proposed collection of information has been submitted to the Office of Management and Budget (OMB) for review and clearance under the Paperwork Reduction Act of 1995.

DATES: Fax written comments on the collection of information by April 25, 2012.

ADDRESSES: To ensure that comments on the information collection are received, OMB recommends that written comments be faxed to the Office of Information and Regulatory Affairs, OMB, Attn: FDA Desk Officer, FAX: 202–395–7285, or emailed to *oira_submission@omb.eop.gov.* All comments should be identified with the OMB control number 0910–0138 and also include the FDA docket number found in brackets in the heading of this document.

FOR FURTHER INFORMATION CONTACT: Daniel Gittleson, Office of Information Management, Food and Drug Administration, 1350 Piccard Dr., PI50–400B, Rockville, MD 20850, 301–796–5156, *Daniel.Gittleson@fda.hhs.gov.*

SUPPLEMENTARY INFORMATION: In compliance with 44 U.S.C. 3507, FDA has submitted the following proposed collection of information to OMB for review and clearance.

Reclassification Petitions for Medical Devices—21 CFR 860.123 (OMB Control Number 0910–0138)—Extension

Under sections 513(e) and (f), 514(b), 515(b), and 520(l) of the Federal Food, Drug, and Cosmetic Act (FD&C Act) (21 U.S.C. 360c(e) and (f), 360d(b), 360e(b), and 360j(l)) and part 860 (21 CFR part 860), subpart C, FDA has responsibility to collect data and information contained in reclassification petitions. The reclassification provisions of the FD&C Act allow any person to petition for reclassification of a device from any of the three classes i.e., I, II, and III, to another class. The reclassification procedure regulation requires the submission of specific data when a manufacturer is petitioning for reclassification. This includes a ''Supplemental Data Sheet,'' Form FDA 3427, and a ''Classification Questionnaire,'' Form FDA 3429. Both forms contain a series of questions concerning the safety and effectiveness of the device type. Further, the reclassification content regulation (§ 860.123) requires the submission of valid scientific evidence demonstrating that the proposed reclassification will provide a reasonable assurance of safety and effectiveness of the device type for its indications for use. Thus, the reclassification provisions of the FD&C Act serve primarily as a vehicle for manufacturers to seek reclassification from a higher to a lower class, thereby reducing the regulatory requirements applicable to a particular device type, or

to seek reclassification from a lower to a higher class, thereby increasing the regulatory requirements applicable to that device type. If approved, petitions requesting classification from class III to class II or class I provide an alternative route to market in lieu of premarket approval for class III devices. If approved, petitions requesting reclassification from class I or II, to a different class, may increase requirements.

In the **Federal Register** of November 14, 2011 (76 FR 70460), FDA published a 60-day notice requesting public comment on the proposed collection of information. No comments were received.

FDA estimates the burden of this collection of information as follows:

TABLE 1—ESTIMATED ANNUAL REPORTING BURDEN [1]

21 CFR section	Number of respondents	Number of responses per respondent	Total annual responses	Average burden per response	Total hours
860.123	6	1	6	500	3,000

[1] There are no capital costs or operating and maintenance costs associated with this collection of information.

Based on the last 3 years, and actual reclassification petitions received, FDA anticipates that six petitions will be submitted each year. The time required to prepare and submit a reclassification petition, including the time needed to assemble supporting data, averages 500 hours per petition. This average is based upon estimates by FDA administrative and technical staff who: (1) Are familiar with the requirements for submission of a reclassification petition, (2) have consulted and advised manufacturers on these requirements, and (3) have reviewed the documentation submitted.

Dated: March 20, 2012.

David Dorsey,

Acting Associate Commissioner for Policy and Planning.

[FR Doc. 2012–7142 Filed 3–23–12; 8:45 am]

BILLING CODE 4160–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2011–N–0742]

Agency Information Collection Activities; Submission for Office of Management and Budget Review; Comment Request; Registration of Producers of Drugs and Listing of Drugs in Commercial Distribution

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice.

SUMMARY: The Food and Drug Administration (FDA) is announcing that a proposed collection of information has been submitted to the Office of Management and Budget (OMB) for review and clearance under the Paperwork Reduction Act of 1995.

DATES: Fax written comments on the collection of information by April 25, 2012.

ADDRESSES: To ensure that comments on the information collection are received, OMB recommends that written comments be faxed to the Office of Information and Regulatory Affairs, OMB, Attn: FDA Desk Officer, FAX: 202–395–7285, or emailed to *oira_submission@omb.eop.gov.* All comments should be identified with the OMB control number 0910–0045. Also include the FDA docket number found in brackets in the heading of this document.

FOR FURTHER INFORMATION CONTACT: Juanmanuel Vilela, Office of Information Management, Food and Drug Administration, 1350 Piccard Dr., PI50–400B, Rockville, MD 20850, 301–796–7651, *juanmanuel.vilela@fda.hhs.gov.*

SUPPLEMENTARY INFORMATION: In compliance with 44 U.S.C. 3507, FDA has submitted the following proposed collection of information to OMB for review and clearance.

Registration of Producers of Drugs and Listing of Drugs in Commercial Distribution—21 CFR Part 207—(OMB Control Number 0910–0045)—Extension

Requirements for drug establishment registration and drug listing are set forth in section 510 of the Federal Food, Drug, and Cosmetic Act (the FD&C Act) (21 U.S.C. 360); section 351 of the Public Health Service Act; and part 207 (21 CFR part 207). Fundamental to FDA's mission to protect the public health is the collection of this information, which is used for important activities such as postmarket surveillance for serious adverse drug reactions, inspection of drug manufacturing and processing facilities, and monitoring of drug products imported into the United States. Comprehensive, accurate, and up-to-date information is critical to conducting these activities with efficiency and effectiveness.

Under section 510 of the FD&C Act, FDA is authorized to establish a system for registration of producers of drugs and for listing of drugs in commercial distribution. To implement section 510 of the FD&C Act, FDA issued part 207.[1] Under current § 207.20, manufacturers, repackers, and relabelers that engage in the manufacture, preparation, propagation, compounding, or processing of human or veterinary drugs and biological products, including bulk drug substances and bulk drug substances for prescription compounding, and drug premixes as well as finished dosage forms, whether prescription or over-the-counter, are required to register their establishment. In addition, manufacturers, repackers, and relabelers are required to submit a listing of every drug or biological product in commercial distribution. Owners or operators of establishments that distribute under their own label or trade name a drug product manufactured by a registered establishment are not required either to register or list. However, distributors may elect to submit drug listing information in lieu of the registered establishment that manufactures the drug product. Foreign drug

[1] This document addresses the information collection in current part 207. In the **Federal Register** of August 29, 2006 (the 2006 proposed rule) (71 FR 51276), FDA proposed to revise part 207. The proposed revisions would reorganize, consolidate, clarify, and modify current regulations concerning who must register establishments and list, and describes when and how to register and list and what information must be submitted for registration and listing. In addition, the proposal would make certain changes to the National Drug Code (NDC) system and would require the appropriate NDC number to appear on the labels for drugs subject to the listing requirements. The proposed regulations generally also require the electronic submission of all registration and most listing information. The 2006 proposed rule requested comments on the information collection for revised part 207. When the proposal is finalized, the information collection for a revised part 207 will replace the information collection in this document.

establishments must also comply with the establishment registration and product listing requirements if they import or offer for import their products into the United States.

Under current § 207.21, establishments, both domestic and foreign, must register with FDA within 5 days after beginning the manufacture of drugs or biologicals, or within 5 days after the submission of a drug application or biological license application (BLA). In addition, establishments must register annually. Changes in individual ownership, corporate or partnership structure, location, or drug-handling activity must be submitted as amendments to registration under current § 207.26 within 5 days of such changes. Under § 207.20(b), private label distributors may request their own labeler code and elect to submit drug listing information to FDA. In such instances, at the time of submitting or updating drug listing information, private label distributors must certify to the registered establishment that manufactured, prepared, propagated, compounded or processed (which includes, among other things, repackaging and relabeling) the listed drug that the drug listing submission was made. Establishments must, within 5 days of beginning the manufacture of drugs or biologicals, submit to FDA a listing for every drug or biological product in commercial distribution at that time. Private label distributors may elect to submit to FDA a listing of every drug product they place in commercial distribution. Registered establishments must submit to FDA drug product listing for those private label distributors who do not elect to submit listing information.

Under § 207.25, product listing information submitted to FDA by domestic and foreign manufacturers must, depending on the type of product being listed, include any new drug application (NDA) number or biological establishment license number, copies of current labeling and a sampling of advertisements, a quantitative listing of the active ingredient for each drug or biological product not subject to an approved application or license, the NDC number, and any drug imprinting information.

In addition to the product listing information required, FDA may also require, under § 207.31, a copy of all advertisements and a quantitative listing of all ingredients for each listed drug or biological product not subject to an approved application or license; the basis for a determination, by the establishment, that a listed drug or biological product is not subject to marketing or licensing approval requirements; and a list of certain drugs or biological products containing a particular ingredient. FDA may also request, but not require, the submission of a qualitative listing of the inactive ingredients for all listed drugs or biological products, and a quantitative listing of the active ingredients for all listed drugs or biological products subject to an approved application or license.

Under § 207.30, establishments must update their product listing information every June and December or, at the discretion of the establishment, when any change occurs. These updates must include the following information: (1) A listing of all drug or biological products introduced for commercial distribution that have not been included in any previously submitted list; (2) all drug or biological products formerly listed for which commercial distribution has been discontinued; (3) all drug or biological products for which a notice of discontinuance was submitted and for which commercial distribution has been resumed; and (4) any material change in any information previously submitted. No update is required if no changes have occurred since the previously submitted list.

Historically, drug establishment registration and drug listing information have been submitted in paper form using Form FDA 2656 (Registration of Drug Establishment/Labeler Code Assignment), Form FDA 2657 (Drug Product Listing), and Form FDA 2658 (Registered Establishments' Report of Private Label Distributors) (collectively referred to as FDA Forms).

Changes in the FD&C Act resulting from enactment of the Food and Drug Administration Amendments Act of 2007 (Pub. L. 110–85) (FDAAA) require that drug establishment registration and drug listing information be submitted electronically unless a waiver is granted. Before the enactment of FDAAA, section 510(p) of the FD&C Act expressly provided for electronic submission of drug establishment registration information upon a finding that electronic receipt was feasible, and section 510(j) of the FD&C Act provided that drug listing information be submitted in the form and manner prescribed by FDA. Section 224 of FDAAA, which amends section 510(p) of the FD&C Act, now expressly, requires electronic drug listing in addition to drug establishment registration. In certain cases, if it is unreasonable to expect a person to submit registration and listing information electronically, FDA may grant a waiver from the electronic format requirement.

In the **Federal Register** of June 1, 2009 (74 FR 26248), FDA announced the availability of a guidance for industry entitled ''Providing Regulatory Submissions in Electronic Format—Drug Establishment Registration and Drug Listing'' (the 2009 guidance). The document provides guidance to industry on the statutory requirement to submit electronically drug establishment registration and drug listing information. The guidance describes the types of information to include for purposes of drug establishment registration and drug listing and how to prepare and submit the information in an electronic format (Structured Product Labeling (SPL) files) that FDA can process, review, and archive.

In addition to the information that previously was collected by the FDA Forms, the guidance addresses electronic submission of other required information as follows:

- For registered foreign drug establishments, the name, address, and telephone number of its U.S. agent (§ 207.40(c));
- The name of each importer that is known to the establishment (the U.S. company or individual in the United States that is an owner, consignee, or recipient of the foreign establishment's drug that is imported into the United States. An importer does not include the consumer or patient who ultimately purchases, receives, or is administered the drug, unless the foreign establishment ships the drug directly to the consumer or the patient) (section 510(i)(1)(A) of the FD&C Act); and
- The name of each person who imports or offers for import (the name of each agent, broker, or other entity, other than a carrier, that the foreign drug establishment uses to facilitate the import of their drug into the United States) (section 510(i)(1)(A) of the FD&C Act).

FDA also recommends the voluntary submission of the following additional information, when applicable:

- To facilitate correspondence between foreign establishments and FDA, the email address for the U.S. agent, and the telephone number(s) and email address for the importer and person who imports or offers for import their drug;
- A site-specific Data Universal Numbering System (DUNS) number for each entity (e.g., the registrant, establishments, U.S. agent, importer);
- The NDC product code for the source drug that is repacked or relabeled;

• Distinctive characteristics of certain listed drugs, i.e., the flavor, the color, and image of the actual solid dosage form; and

• Registrants may indicate that they view as confidential the registrant's business relationship with an establishment, or an inactive ingredient.

In addition to the collection of information, there is additional burden for the following activities:

• Preparing a standard operating procedure (SOP) for the electronic submission of drug establishment registration and drug listing information;

• Creating the SPL file, including accessing and reviewing the technical specifications and instructional documents provided by FDA (accessible at *http://www.fda.gov/oc/datacouncil/spl.html*);

• Reviewing and selecting appropriate terms and codes used to create the SPL file (accessible at *http://www.fda.gov/oc/datacouncil/spl.html*);

• Obtaining the digital certificate used with FDA's electronic submission gateway and uploading the SPL file for submission (accessible at *http://www.fda.gov/esg/default.htm*); and

• Requests for waivers from the electronic submission process as described in the draft guidance.

When FDA published the 2009 guidance on submitting establishment registration and drug listing information in electronic format, the Agency also amended its burden estimates for OMB control number 0910–0045 to include the additional burden for collection of information that had not been submitted using the FDA Forms, and to create and upload the SPL file. The amended burden estimates included the one-time preparation of an SOP for creating and uploading the SPL file. Although most firms will already have prepared an SOP for the electronic submission of drug establishment registration and drug listing information, each year additional firms will need to create an SOP. As provided in table 2 of this document, FDA estimates that approximately 1,000 firms will have to expend a one-time burden to prepare, review, and approve an SOP, and the Agency estimates that it will take 40 hours per recordkeeper to create 1,000 new SOPs for a total of 40,000 hours. The information collection requirements of the Drug Listing and Establishment Registration regulations have been grouped according to the information collection areas of the regulations.

In the **Federal Register** of October 24, 2011 (76 FR 65730), FDA published a 60-day notice requesting public comment on the proposed collection of information. FDA received one comment.

Comment

The comment raised two issues and asked for several procedural clarifications. The first issue raised suggested that the burden to industry might be greater than the 4.5-hour average provided in the estimate. The next issue questioned the process by which FDA issued a guidance to address the electronic submissions process without changing the regulation that still describes a paper submission process, which would have allowed for public comment on that change. The comment then sought several procedural clarifications on: (1) How to submit changes in ownership of an establishment, (2) how to select a business function, (3) how to ensure that an establishment is represented consistently between a vendor's registration and the client's drug establishment registration, (4) how to link an importer with a particular product, (5) how to list bulk tablets that will be imported for packaging, and (6) how to certify to the registered establishment that the private label distributor has listed the product.

Response

FDA acknowledges that the 2009 guidance is different from the process described in the current part 207. As was stated in the **Federal Register** notice and as acknowledged by the commenter, the current regulation predates the electronic process and describes a paper-based submission process. FDA is in the process of rewriting part 207, and published the draft version for public comment in 2006. Afterward, the FDAAA mandated the electronic submission of drug establishment and drug product information. The 2009 guidance was created to address the mandate of FDAAA. The 2006 proposed rule will be modified appropriately to address the FDAAA mandates as well. With regards to the estimated burden, FDA collaborated with members of industry and international health information data standards organizations to arrive at the current process and estimates for the burden of gathering, assembling, and submitting data. The estimates are considered to be averages that will vary up or down per individual respondent.

The following paragraphs are intended to clarify one of the commenter's issues mentioned previously in this document:

1. Changes to the establishment name, registrant name, or other registration information can be made by submitting an updated registration submission via SPL. Changes in corporate ownership or officers that do not affect names, addresses, or the DUNS number(s) for a registered establishment should be made with Dun and Bradstreet. That data is then referenced as needed by FDA using the DUNS number. Information about submitting SPL can be found at the link at the end of the FDA response. It should be noted that changes in ownership may also require the submission of updates to listing information, labeler code name and DUNS, and application data for NDAs, abbreviated new drug applications (ANDAs), BLAs, new animal drug applications (NADAs), and abbreviated new animal drug applications (ANADAs).

2. For selecting a business operation, a current list of valid business functions and their associated codes can be found at the link at the end of this response. Please note that if more than one business function apply, a registrant should select all that apply and include them in the registration SPL.

3. FDA has implemented an automated validation of all drug product listing submissions to ensure that each establishment referenced in the product listing is registered under the same business operation. For example, a product listing SPL that references a particular facility as a packer of the product will be rejected if that establishment has not chosen Pack as a business operation in its registration. FDA expects vendors and clients to communicate this information directly to each other and, if necessary, coordinate their submissions in order to avoid issues with this validation.

4. The importer information is submitted via the registration of the foreign establishment. Any product listing referencing that foreign establishment should therefore provide the necessary link from importer to product. Information about submitting SPL can be found at the link at the end of the FDA response.

5. A product listing for bulk tablets intended for further processing or packaging should be listed using the SPL product/document type of Bulk Ingredient and a marketing category of Drug for Further Processing. Information about submitting SPL can be found at the link at the end of the FDA response.

6. For finished dosage forms, appearance in the NDC Directory is proof of submission of listing. Note that unfinished products and active pharmaceutical ingredient listings will not appear in the NDC Directory.

Instructions and SPL resources may be found on the SPL Resources Web page at *http://www.fda.gov/ForIndustry/DataStandards/StructuredProductLabeling/default.htm*

FDA estimates the burden of this collection of information as follows:

TABLE 1—ESTIMATED ANNUAL REPORTING BURDEN [1]

Activity	Number of respondents	Number of responses per respondent	Total annual responses	Average burden per response	Total hours
New registrations, including new labeler codes requests	39	14.72	574	4.5	2,583
Annual updates of registration information	3,256	2.99	9,735	4.5	43,808
New drug listings	1,567	6.57	10,295	4.5	46,328
New listings for private label distributor	146	10.06	1,469	4.5	6,611
June and December updates of all drug listing information	1,677	11.21	18,799	4.5	84,596
Waiver requests	1	1	1	1	1
Total					183,927

[1] There are no capital costs or operating and maintenance costs associated with this collection of information.

TABLE 2—ESTIMATED ANNUAL RECORDKEEPING BURDEN [1]

Activity resulting from section 510(p) of the FD&C Act as amended by FDAAA	Number of recordkeepers	Number of records per recordkeeper	Total annual records	Average burden per recordkeeping	Total hours
One-time preparation of SOP	1,000	1	1,000	40	40,000
SOP maintenance	3,295	1	3,295	1	3,295
Total					43,295

[1] There are no capital costs or operating and maintenance costs associated with this collection of information.

Dated: March 20, 2012.

Leslie Kux,

Acting Assistant Commissioner for Policy.

[FR Doc. 2012–7136 Filed 3–23–12; 8:45 am]

BILLING CODE 4160–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2012–N–0001]

Antiviral Drugs Advisory Committee; Notice of Meeting

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice.

This notice announces a forthcoming meeting of a public advisory committee of the Food and Drug Administration (FDA). The meeting will be open to the public.

Name of Committee: Antiviral Drugs Advisory Committee.

General Function of the Committee: To provide advice and recommendations to the Agency on FDA's regulatory issues.

Date and Time: The meeting will be held on May 11, 2012, from 8 a.m. to 5 p.m.

Location: DoubleTree by Hilton Hotel Washington DC/Silver Spring, The Ballrooms, 8727 Colesville Rd., Silver Spring, MD. The hotel telephone number is 301–589–5200.

Contact Person: Yvette Waples, Center for Drug Evaluation and Research, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 31, Rm. 2417, Silver Spring, MD 20993–0002, 301–796–9001, FAX: 301–847–8533, email: *AVAC@fda.hhs.gov,* or FDA Advisory Committee Information Line, 1–800–741–8138 (301–443–0572 in the Washington, DC area), and follow the prompts to the desired center or product area. Please call the Information Line for up-to-date information on this meeting. A notice in the **Federal Register** about last minute modifications that impact a previously announced advisory committee meeting cannot always be published quickly enough to provide timely notice. Therefore, you should always check the Agency's Web site and call the appropriate advisory committee hot line/phone line to learn about possible modifications before coming to the meeting.

Agenda: The committee will discuss new drug application (NDA) 203–100, for a fixed-dose combination tablet of elvitegravir/cobicistat/emtricitabine/tenofovir disoproxil fumarate, submitted by Gilead Sciences, Inc. The application proposes an indication for the treatment of HIV–1 infection in adults who are antiretroviral naïve or have no known substitutions associated with resistance to the individual components.

FDA intends to make background material available to the public no later than 2 business days before the meeting. If FDA is unable to post the background material on its Web site prior to the meeting, the background material will be made publicly available at the location of the advisory committee meeting, and the background material will be posted on FDA's Web site after the meeting. Background material is available at *http://www.fda.gov/AdvisoryCommittees/Calendar/default.htm.* Scroll down to the appropriate advisory committee link.

Procedure: Interested persons may present data, information, or views, orally or in writing, on issues pending before the committee. Written submissions may be made to the contact person on or before April 27, 2012. Oral presentations from the public will be scheduled between approximately 1 p.m. and 2 p.m. Those individuals interested in making formal oral presentations should notify the contact person and submit a brief statement of the general nature of the evidence or arguments they wish to present, the names and addresses of proposed participants, and an indication of the approximate time requested to make their presentation on or before April 19, 2012. Time allotted for each presentation may be limited. If the number of registrants requesting to

speak is greater than can be reasonably accommodated during the scheduled open public hearing session, FDA may conduct a lottery to determine the speakers for the scheduled open public hearing session. The contact person will notify interested persons regarding their request to speak by April 20, 2012.

Persons attending FDA's advisory committee meetings are advised that the Agency is not responsible for providing access to electrical outlets.

FDA welcomes the attendance of the public at its advisory committee meetings and will make every effort to accommodate persons with physical disabilities or special needs. If you require special accommodations due to a disability, please contact Yvette Waples at least 7 days in advance of the meeting.

FDA is committed to the orderly conduct of its advisory committee meetings. Please visit our Web site at *http://www.fda.gov/AdvisoryCommittees/AboutAdvisoryCommittees/ucm111462.htm* for procedures on public conduct during advisory committee meetings.

Notice of this meeting is given under the Federal Advisory Committee Act (5 U.S.C. app. 2).

Dated: March 20, 2012.

Leslie Kux,

Acting Assistant Commissioner for Policy.

[FR Doc. 2012–7178 Filed 3–23–12; 8:45 am]

BILLING CODE 4160–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Amendment to Proposed Collection: Comment Request Post-Award Reporting Requirements Including New Research Performance Progress Report Collection

The 60-day **Federal Register** Notice for the proposed revision of information collection Public Health Service (PHS) Post-award Reporting Requirements, published March 5, 2012 (77 FR 13131), neglected to include the OMB information collection approval number. The number is OMB 0925–0002, expiration 06/30/2012. There are no additional corrections or changes to that Notice.

Dated: March 15, 2012.

Joe Ellis,

Director, Office of Policy for Extramural Research Administration, Office of Extramural Research, National Institutes of Health.

[FR Doc. 2012–7238 Filed 3–23–12; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Library of Medicine; Notice of Meeting

Pursuant to section 10(a) of the Federal Advisory Committee Act, as amended (5 U.S.C. App), notice is hereby given of a meeting of the PubMed Central National Advisory Committee.

The meeting will be open to the public as indicated below, with attendance limited to space available. Individuals who plan to attend and need special assistance, such as sign language interpretation or other reasonable accommodations, should notify the Contact Person listed below in advance of the meeting.

Name of Committee: PubMed Central National Advisory Committee.

Date: June 19, 2012.

Time: 9:30 a.m. to 3 p.m.

Agenda: Review and Analysis of Systems.

Place: National Library of Medicine, Building 38, 2nd Floor, Board Room, 8600 Rockville Pike, Bethesda, MD 20892.

Contact Person: David J. Lipman, M.D., Director, National Center for Biotechnology Information, National Library of Medicine, Building 38, Room 8N805, Bethesda, MD 20894, 301–435–5985, *dlipman@mail.nih.gov*.

Any interested person may file written comments with the committee by forwarding the statement to the Contact Person listed on this notice. The statement should include the name, address, telephone number and when applicable, the business or professional affiliation of the interested person.

In the interest of security, NIH has instituted stringent procedures for entrance onto the NIH campus. All visitor vehicles, including taxicabs, hotel, and airport shuttles will be inspected before being allowed on campus. Visitors will be asked to show one form of identification (for example, a government-issued photo ID, driver's license, or passport) and to state the purpose of their visit.

Information is also available on the Institute's/Center's home page: *http://www.pubmed.central.nih.gov/about/nac/html,* where an agenda and any additional information for the meeting will be posted when available.

(Catalogue of Federal Domestic Assistance Program No. 93.879, Medical Library Assistance, National Institutes of Health, HHS.)

Dated: March 20, 2012.

Jennifer S. Spaeth,

Director, Office of Federal Advisory Committee Policy.

[FR Doc. 2012–7240 Filed 3–23–12; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Library of Medicine ; Notice of Closed Meetings

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. App), notice is hereby given of the meetings.

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable materials, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Biomedical Library and Informatics Review Committee

Date: June 7–8, 2012.

Time: June 7, 2012, 8 a.m. to 6 p.m.

Agenda: To review and evaluate grant applications

Place: National Library of Medicine, Building 38, 2nd Floor, Board Room, 8600 Rockville Pike, Bethesda, MD 20892.

Time: June 8, 2012, 8 a.m. to 2 p.m.

Agenda: To review and evaluate grant applications.

Contact Person: Arthur A. Petrosian, Ph.D., Chief Scientific Review Officer, Division of Extramural Programs, National Library of Medicine, 6705 Rockledge Drive, Suite 301, Bethesda, MD 20892–7968, 301–496–4253, *petrosia@mail.nih.gov*

(Catalogue of Federal Domestic Assistance Program No. 93.879, Medical Library Assistance, National Institutes of Health, HHS.)

Dated: March 20, 2012.

Jennifer S. Spaeth,

Director, Office of Federal Advisory Committee Policy.

[FR Doc. 2012–7239 Filed 3–23–12; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Library of Medicine Notice of Meetings

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. App), notice is hereby given of a meeting of the Literature Selection Technical Review Committee.

The meeting will be open to the public as indicated below, with

attendance limited to space available. Individuals who plan to attend and need special assistance, such as sign language interpretation or other reasonable accommodations, should notify the Contact Person listed below in advance of the meeting.

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended because the premature disclosure of journals as potential titles to be indexed by the National Library of Medicine and the discussions would likely to significantly frustrate implementation of recommendations.

Name of Committee: Literature Selection Technical Review Committee.

Date: June 21–22, 2012.

Open: June 21, 2012, 9 a.m. to 11 a.m.

Agenda: Administrative .

Place: National Library of Medicine, Building 38, 2nd Floor, Board Room, 8600 Rockville Pike, Bethesda, MD 20894.

Closed: June 21, 2012, 11 a.m. to 5 p.m.

Agenda: To review and evaluate journals as potential titles to be indexed by the National Library of Medicine.

Place: National Library of Medicine, Building 38, 2nd Floor, Board Room, 8600 Rockville Pike, Bethesda, MD 20894.

Closed: June 22, 2012, 8:30 a.m. to 2 p.m.

Agenda: To review and evaluate journals as potential titles to be indexed by the National Library of Medicine.

Place: National Library of Medicine, Building 38, 2nd Floor, Board Room, 8600 Rockville Pike, Bethesda, MD 20894.

Contact Person: Sheldon Kotzin, MLS, Associate Director, Division of Library Operations, National Library of Medicine, 8600 Rockville Pike, Building 38, Room 2W06, Bethesda, MD 20892, 301–496–6921, *kotzins@mail.nih.gov.*

Any interested person may file written comments with the committee by forwarding the statement to the Contact Person listed on this notice. The statement should include the name, address, telephone number and when applicable, the business or professional affiliation of the interested person.

In the interest of security, NIH has instituted stringent procedures for entrance onto the NIH campus. All visitor vehicles, including taxicabs, hotel, and airport shuttles will be inspected before being allowed on campus. Visitors will be asked to show one form of identification (for example, a government-issued photo ID, driver's license, or passport) and to state the purpose of their visit.

(Catalogue of Federal Domestic Assistance Program No. 93.879, Medical Library Assistance, National Institutes of Health, HHS.)

Dated: March 20, 2012.

Jennifer S. Spaeth,

Director, Office of Federal Advisory Committee Policy.

[FR Doc. 2012–7242 Filed 3–23–12; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. App.), notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; RFA–RM–12–001 & RFA–RM–11–022: Microphysiological Systems Review.

Date: April 19–20, 2012.

Time: 8 a.m. to 5 p.m.

Agenda: To review and evaluate grant applications.

Place: Hyatt Regency Bethesda, One Bethesda Metro Center, 7400 Wisconsin Avenue, Bethesda, MD 20814.

Contact Person: Raymond Jacobson, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 5858, MSC 7849, Bethesda, MD 20892, 301–996–7702, *jacobsonrh@csr.nih.gov.*

Name of Committee: Center for Scientific Review Special Emphasis Panel; FIRCA and GRIP in Behavioral/Social Sciences.

Date: April 19, 2012.

Time: 9 a.m. to 5 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, 6701 Rockledge Drive, Room 6087, Bethesda, MD 20892.

Contact Person: Lisa Steele, Ph.D., Scientific Review Officer, PSE IRG, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 3139, MSC 7770, Bethesda, MD 20892, 301–594–6594, *steeleln@csr.nih.gov.*

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: March 19, 2012.

Jennifer S. Spaeth,

Director, Office of Federal Advisory Committee Policy.

[FR Doc. 2012–7251 Filed 3–23–12; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of General Medical Sciences; Notice of Closed Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. App.), notice is hereby given of the following meeting.

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: National Institute of General Medical Sciences Special Emphasis Panel; Review of K99 Grant Applications.

Date: April 16, 2012.

Time: 8 a.m. to 5 p.m.

Agenda: To review and evaluate grant applications.

Place: Courtyard by Marriott, 5520 Wisconsin Avenue, Chevy Chase, MD 20815.

Contact Person: John J. Laffan, Ph.D., Scientific Review Officer, Office of Scientific Review, National Institute of General Medical Sciences, National Institutes of Health, 45 Center Drive, Room 3An18J, Bethesda, MD 20892, 301–594–2773, *laffanjo@mail.nih.gov.*

(Catalogue of Federal Domestic Assistance Program Nos. 93.375, Minority Biomedical Research Support; 93.821, Cell Biology and Biophysics Research; 93.859, Pharmacology, Physiology, and Biological Chemistry Research; 93.862, Genetics and Developmental Biology Research; 93.88, Minority Access to Research Careers; 93.96, Special Minority Initiatives, National Institutes of Health, HHS)

Dated: March 19, 2012.

Jennifer S. Spaeth,

Director, Office of Federal Advisory Committee Policy.

[FR Doc. 2012–7250 Filed 3–23–12; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Library of Medicine; Notice of Meetings

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. App), notice is hereby given of meetings of the Board of Regents of the National Library of Medicine.

The meeting will be open to the public as indicated below, with attendance limited to space available. Individuals who plan to attend and need special assistance, such as sign language interpretation or other reasonable accommodations, should notify the Contact Person listed below in advance of the meeting.

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable materials, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Board of Regents of the National Library of Medicine Extramural Programs Subcommittee.

Date: May 7, 2012.

Closed: 2:30 p.m. to 4 p.m.

Agenda: To review and discuss grants and new programs.

Place: National Library of Medicine, Building 38, 2nd Floor, Conference Room B, 8600 Rockville Pike, Bethesda, MD 20892.

Contact Person: Donald A.B. Lindberg, M.D., Director, National Library of Medicine, 8600 Rockville Pike, Bethesda, MD 20892, 301–496–6221, *lindberg@mail.nih.gov*.

Name of Committee: Board of Regents of the National Library of Medicine Subcommittee on Outreach and Public Information.

Date: May 8, 2012.

Open: 7:45 a.m. to 8:45 a.m.

Agenda: To review and discuss outreach activities.

Place: National Library of Medicine, Building 38, 2nd Floor, Conference Room B, 8600 Rockville Pike, Bethesda, MD 20892.

Contact Person: Donald A.B. Lindberg, M.D., Director, National Library of Medicine, 8600 Rockville Pike, Bethesda, MD 20892, 301–496–6221, *lindberg@mail.nih.gov*.

Name of Committee: Board of Regents of the National Library of Medicine.

Date: May 8–9, 2012.

Open: May 8, 2012, 9 a.m. to 4:10 p.m.

Agenda: Program Discussion.

Place: National Library of Medicine, Building 38, 2nd Floor, Board Room, 8600 Rockville Pike, Bethesda, MD 20892.

Closed: May 8, 2012, 4:10 p.m. to 4:30 p.m.

Agenda: To review and evaluate grant applications.

Place: National Library of Medicine, Building 38, 2nd Floor, Board Room, 8600 Rockville Pike, Bethesda, MD 20892.

Open: May 9, 2012, 9 a.m. to 12 p.m.

Agenda: Program Discussion.

Place: National Library of Medicine, Building 38, 2nd Floor, Board Room, 8600 Rockville Pike, Bethesda, MD 20892.

Contact Person: Donald A.B. Lindberg, M.D., Director, National Library of Medicine, 8600 Rockville Pike, Bethesda, MD 20892, 301–496–6221, *lindberg@mail.nih.gov*.

Any interested person may file written comments with the committee by forwarding the statement to the Contact Person listed on this notice. The statement should include the name, address, telephone number and when applicable, the business or professional affiliation of the interested person.

In the interest of security, NIH has instituted stringent procedures for entrance onto the NIH campus. All visitor vehicles, including taxicabs, hotel, and airport shuttles will be inspected before being allowed on campus. Visitors will be asked to show one form of identification (for example, a government-issued photo ID, driver's license, or passport) and to state the purpose of their visit.

Information is also available on the Institute's/Center's home page: *www.nlm.nih.gov/od/bor/bor.html,* where an agenda and any additional information for the meeting will be posted when available.

(Catalogue of Federal Domestic Assistance Program No. 93.879, Medical Library Assistance, National Institutes of Health, HHS).

Dated: March 20, 2012.

Jennifer S. Spaeth,

Office of Federal Advisory Committee Policy.

[FR Doc. 2012–7249 Filed 3–23–12; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Library of Medicine; Notice of Closed Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. App), notice is hereby given of the following meeting.

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable materials, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: National Library of Medicine Special Emphasis Panel, Conflict R01/K99/K22.

Date: May 17, 2012.

Time: 12 p.m. to 4 p.m.

Agenda: To review and evaluate grant applications.

Place: National Library of Medicine, 6705 Rockledge Drive, Suite 301, Bethesda, MD 20817, (Telephone Conference Call).

Contact Person: Zoe H. Huang, M.D., Scientific Review Officer, Extramural Programs, National Library of Medicine, NIH, 6705 Rockledge Drive, Suite 301, Bethesda, MD 20892–7968, 301–594–4937, *hungz@mail.nih.gov*.

(Catalogue of Federal Domestic Assistance Program No. 93.879, Medical Library Assistance, National Institutes of Health, HHS).

Dated: March 20, 2012.

Jennifer S. Spaeth,

Director, Office of Federal Advisory Committee Policy.

[FR Doc. 2012–7248 Filed 3–23–12; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Library of Medicine; Notice of Meetings

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. App), notice is hereby given of meetings of the Board of Regents of the National Library of Medicine.

The meeting will be open to the public as indicated below, with attendance limited to space available. Individuals who plan to attend and need special assistance, such as sign language interpretation or other reasonable accommodations, should notify the Contact Person listed below in advance of the meeting.

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable materials, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Board of Regents of the National Library of Medicine Disaster Information Management Research Center Working Group.

Date: May 7, 2012.

Open: 9 a.m. to 4 p.m.

Agenda: Review and discuss the current activities of NLM's Disaster Information Management Research Center.

Place: National Library of Medicine, Building 38, 2nd Floor, Board Room, 8600 Rockville Pike, Bethesda, MD 20892.

Contact Person: Donald A.B. Lindberg, M.D., Director, National Library of Medicine, 8600 Rockville Pike, Bethesda, MD 20892, 301–496–6221, *lindberg@mail.nih.gov.*

Any interested person may file written comments with the committee by forwarding the statement to the Contact Person listed on this notice. The statement should include the name, address, telephone number and when applicable, the business or professional affiliation of the interested person.

In the interest of security, NIH has instituted stringent procedures for entrance onto the NIH campus. All visitor vehicles, including taxicabs, hotel, and airport shuttles will be inspected before being allowed on campus. Visitors will be asked to show one form of identification (for example, a government-issued photo ID, driver's license, or passport) and to state the purpose of their visit.

Information is also available on the Institute's/Center's home page: *www.nlm.nih.gov/od/bor/bor.html,* where an agenda and any additional information for the meeting will be posted when available.

(Catalogue of Federal Domestic Assistance Program No. 93.879, Medical Library Assistance, National Institutes of Health, HHS).

Dated: March 20, 2012.

Jennifer S. Spaeth,

Director, Office of Federal Advisory Committee Policy.

[FR Doc. 2012–7244 Filed 3–23–12; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

[Docket No. USCG–2012–0091]

National Offshore Safety Advisory Committee

AGENCY: United States Coast Guard, Department of Homeland Security.

ACTION: Committee Management; Notice of Federal Advisory Committee Meetings.

SUMMARY: The National Offshore Safety Advisory Committee (NOSAC) will meet on April 11 and 12, 2012, in New Orleans, Louisiana to discuss various issues related to safety of operations and other matters affecting the oil and gas offshore industry. These meetings are open to the public.

DATES: NOSAC will meet Wednesday, April 11, 2012 from 12 p.m. to 5 p.m. and Thursday, April 12, 2012, from 8:30 a.m. to 5 p.m. Three subcommittees will meet the afternoon of April 11. Please note that the meetings may close early if the committee has completed its business or be extended based on the level of public comments.

ADDRESSES: The meetings will be held at the Renaissance New Orleans Arts Hotel, 700 Tchoupitoulas Street, New Orleans, Louisiana 70130, *http://www.marriott.com/hotels/travel/msydt-renaissance-new-orleans-arts-hotel/.* There are three breakout rooms reserved for the afternoon on April 11. The April 12 meeting will also be held at Renaissance New Orleans Arts Hotel, in the Patrons Room.

For information on facilities or services for individuals with disabilities or to request special assistance at the meeting, contact the person listed in **FOR FURTHER INFORMATION CONTACT** as soon as possible.

To facilitate public participation, we are inviting public comment on the issues to be considered by the committee as listed in the ''AGENDA'' section below. Comments must be submitted in writing no later than April 1, 2012, and must be identified by USCG–2012–0091 and may be submitted by *one* of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments.
- *Fax:* (202) 493–2251.
- *Mail:* Docket Management Facility (M–30), U.S. Department of Transportation, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590–0001.
- *Hand Delivery:* Same as mail address above, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The telephone number is 202–366–9329.

Instructions: All submissions received must include the words ''Department of Homeland Security'' and the docket number for this action. Comments received will be posted without alteration at *http://www.regulations.gov,* including any personal information provided. You may review a Privacy Act notice regarding our public dockets in the January 17, 2008, issue of the **Federal Register** (73 FR 3316).

Docket: For access to the docket to read documents or comments related to this Notice, go to *http://www.regulations.gov.*

A public comment period will be held during the meeting on April 12, 2012, and speakers are requested to limit their comments to 3 minutes. Please note that the public comment period may end before the time indicated, following the last call for comments. Contact the individual listed below to register as a speaker.

FOR FURTHER INFORMATION CONTACT: Commander Rob Smith, Designated Federal Officer of NOSAC, Commandant (CG–5222), U.S. Coast Guard, 2100 Second Street SW., Stop 7126, Washington, DC 20593–0001 or Mr. Kevin Pekarek, Alternate Designated Federal Officer of NOSAC, Commandant (CG–5222), U.S. Coast Guard, 2100 Second Street SW., Stop 7126, Washington, DC 20593–0001; telephone (202) 372–1386, fax (202) 372–1926. If you have questions on viewing or submitting material to the docket, call Renee V. Wright, Program Manager, Docket Operations, telephone 202–366–9826.

SUPPLEMENTARY INFORMATION: Notice of this meeting is given under the *Federal Advisory Committee Act,* 5 U.S.C. App. (Pub. L. 92–463). The National Offshore Safety Advisory Committee (NOSAC) provides advice and recommendations to the Department of Homeland Security on matters and actions concerning activities directly involved with or in support of the exploration of offshore mineral and energy resources insofar as they relate to matters within U.S. Coast Guard jurisdiction.

Agenda

Day 1

NOSAC's three subcommittees will meet on April 11, 2012 between 12 p.m. and 5 p.m., to discuss its ongoing work. Times for these meetings are as follows: (1) Standards for Dynamic Positioning (DP) Operating Personnel (12 p.m. to 2:30 p.m.); (2) Medical Evacuation of Injured Divers (2 p.m. to 4 p.m.); and (3) Review of the Mississippi Canyon Incident Reports stemming from the Deepwater Horizon casualty event (2:30 p.m. to 5 p.m.).

Day 2

The NOSAC will meet on April 12, 2012 to review and discuss reports and recommendations received from the three subcommittees from their deliberations on April 11. The Committee will then use this information to formulate recommendations to the agency. The meeting will be open for public comment at the end of the day, see Agenda item (17).

A complete agenda for April 12th is as follows:

(1) Roll call of committee members and determination of a quorum.

(2) Approval of minutes from the February 15, 2012, meeting.

(3) Committee Administration.

The swearing in of new members from fiscal year 2009, 2010 and 2011 (if seated) slates of candidates.

(4) Welcoming comments from Eighth District Commander; Director of Commercial Regulations and Standards (CG–52); and Commander, Sector New Orleans.

(5) Presentation and discussion of reports and recommendations from the subcommittees and subsequent actions on:

(a) Standards for DP Operating Personnel.

(b) Medical Evacuation of Injured Divers.

(c) Mississippi Canyon Incident Reports.

(6) An update and discussion on recent U.S. Coast Guard regulations and **Federal Register** notices that affect the offshore industry.

(7) Offshore Operators Committee (OOC) update regarding medical evacuations from the Outer Continental Shelf (OCS).

(8) Present a capsulation of the industry comments received from the Mobile Offshore Drilling Unit Guidance Policy, Notice of Availability, request for comments and public meeting published in the **Federal Register** December 29, 2011 (76 FR 81957), docket No. USCG–2011–1106; and discuss a way forward to ensuring these vital systems are appropriately maintained and tested.

(9) U.S. Coast Guard National Center of Expertise (NCOE) Outer Continental Shelf Inspections will lead discussions on where and how can the USCG improve on training.

(10) Update from the Bureau of Safety and Environmental Enforcement (BSEE) concerning the status of their Deepwater Horizon Investigation Recommendations.

(11) Updates on International Maritime Organization (IMO) activities of interest to the OCS community.

(12) Statistical discussion on commercial diving casualties and analysis of OCS casualties.

(13) Update on alternatives and enforcement policy concerning the Notice of Arrival on the Outer Continental Shelf rulemaking, published in the **Federal Register** January 13, 2011 (76 FR 2254).

(14) Discussion on the state of the industry: Well Control Training and current issues to be resolved to improve training for persons with Well Control responsibilities.

(15) Task Statement discussion of Safety and Environmental Management System: A joint regulatory effort between the U.S. Coast Guard and BSEE.

(16) A progress report from the U.S. Coast Guard on the last 5 years of NOSAC's submitted final reports and the disposition/actions the U.S. Coast Guard has taken regarding these reports.

(17) Period for Public comment.

(18) Adjournment of meeting.

A copy of each report is available at the *https://www.fido.gov* Web site or by contacting Kevin Y. Pekarek. Use ''code 68'' to identify NOSAC when accessing this material. Once you have accessed the Committee page, click on the meetings tab and then the ''View'' button for the meeting dated April 12, 2012, to access the information for this meeting. Minutes will be available approximately 30 days after this meeting. Both minutes and documents applicable for this meeting can also be found at an alternative site using the following Web address: *https://homeport.uscg.mil* and use these key strokes: Missions>Port and Waterways>Safety Advisory Committee>NOSAC and then use the event key.

The meeting will be recorded by a court reporter. A transcript of the meeting and any material presented at the meeting will be made available through the *https://www.fido.gov* Web site.

The committee will review the information presented on each issue, deliberate on any recommendations presented in the subcommittees' reports, and formulate recommendations for the Department's consideration.

The committee will also receive tasking from CDR Rob Smith, Designated Federal Officer, on one proposed task statements: Safety and Environmental Management System and to make recommendations to the U.S. Coast Guard on same.

Dated: March 15, 2012.

J.G. Lantz,

Director of Commercial Regulations and Standards.

[FR Doc. 2012–7126 Filed 3–23–12; 8:45 am]

BILLING CODE 9110–04–P

DEPARTMENT OF HOMELAND SECURITY

U.S. Customs and Border Protection

[CBP Dec. No. 12–05]

Expansion of Global Entry to Additional Airports

AGENCY: U.S. Customs and Border Protection; Department of Homeland Security.

ACTION: General notice.

SUMMARY: U.S. Customs and Border Protection (CBP) has established an international trusted traveler program, referred to as Global Entry, at twenty major U.S. airports. Global Entry allows pre-approved, low-risk participants expedited entry into the United States using Global Entry kiosks located at designated airports. This document announces the expansion of the program to include four additional airports.

DATES: Global Entry will be available at all four airport locations on or before September 22, 2012. The exact starting date for each airport location will be announced on the Web site at *http://www.globalentry.gov.*

FOR FURTHER INFORMATION CONTACT: Larry Panetta, Office of Field Operations, (202) 344–1253, *Larry.Panetta@dhs.gov.*

SUPPLEMENTARY INFORMATION:

Background

Global Entry Program

Global Entry is a voluntary program that allows for the expedited clearance of pre-approved, low-risk travelers arriving in the United States at Global Entry kiosks located at designated airports. The Global Entry final rule, published on February 6, 2012, promulgated the regulation to establish Global Entry as a permanent regulatory program and contains a detailed description of the program, the eligibility criteria, the application and selection process, and the initial airport locations. *See* 77 FR 5681 and 8 CFR 235.12. Travelers who wish to participate in Global Entry must apply via the CBP Global Entry Web site, *http://www.globalentry.gov* or through the Global On-Line Enrollment System (GOES) Web site, *https://goes-app.cbp.dhs.gov.* Applications must be completed and submitted electronically.

The twenty airports initially chosen for Global Entry were those facilities which typically experience the largest numbers of travelers arriving from outside of the United States. They include:

- John F. Kennedy International Airport, Jamaica, New York (JFK);
- The George Bush Intercontinental Airport, Houston, Texas (IAH);
- The Washington Dulles International Airport, Sterling, Virginia (IAD);
- Los Angeles International Airport, Los Angeles, California (LAX);
- Hartsfield-Jackson Atlanta International Airport, Atlanta, Georgia (ATL);
- Chicago O'Hare International Airport, Chicago, Illinois (ORD);

• Miami International Airport, Miami, Florida (MIA);

• Newark Liberty International Airport, Newark, New Jersey (EWR);

• San Francisco International Airport, San Francisco, California (SFO);

• Orlando International Airport, Orlando, Florida (MCO);

• Detroit Metropolitan Wayne County Airport, Romulus, Michigan (DTW);

• Dallas Fort Worth International Airport, Dallas, Texas (DFW);

• Honolulu International Airport, Honolulu, Hawaii (HNL);

• Boston—Logan International Airport, Boston, Massachusetts (BOS);

• Las Vegas—McCarran International Airport, Las Vegas, Nevada (LAS);

• Sanford—Orlando International Airport, Sanford, Florida (SSB);

• Seattle—Tacoma International Airport-SEATAC, Seattle, Washington (STT);

• Philadelphia International Airport, Philadelphia, Pennsylvania (PHL);

• San Juan—Luis Munos Marin International Airport, San Juan, Puerto Rico (SAJ);

• Ft. Lauderdale Hollywood International Airport, Fort Lauderdale, Florida (FLL), including the General Aviation Facility private aircraft terminal.

The preamble to the final rule states that when CBP is ready to expand Global Entry to additional airports and has selected the airports, CBP will publish an announcement in the **Federal Register** and in a posting on the Web site, *http://www.globalentry.gov.*

Expansion of Global Entry Program to Additional Airports

CBP is expanding the Global Entry program to include the following four additional airports: St. Paul International Airport, Minneapolis, Minnesota (MSP); Charlotte Douglas International Airport, Charlotte, North Carolina (CLT); Phoenix Sky Harbor International Airport, Phoenix, Arizona (PHX); and Denver International Airport, Denver, Colorado (DEN). Global Entry will become operational at all four airports on or before September 22, 2012. The exact starting dates of the expansion of Global Entry to each airport location will be announced on the Web site at *http://www.globalentry.gov.*

Dated: March 21, 2012.

Kevin K. McAleenan,

Acting Assistant Commissioner, Office of Field Operations.

[FR Doc. 2012–7227 Filed 3–23–12; 8:45 am]

BILLING CODE 9111–14–P

DEPARTMENT OF THE INTERIOR

Office of the Secretary

Agency Information Collection Activities: Proposed Collection; Comment Request; DOI Generic Clearance for the Collection of Qualitative Feedback on Agency Service Delivery

AGENCY: Department of the Interior.

ACTION: 30-Day notice of submission of information collection to the Office of Management and Budget and request for comments.

SUMMARY: As part of a Federal Government-wide effort to streamline the process to seek feedback from the public on service delivery, the U.S. Department of the Interior has submitted a Generic Information Collection Request (Generic ICR): ''DOI Generic Clearance for the Collection of Qualitative Feedback on Agency Service Delivery'' to OMB for approval under the Paperwork Reduction Act (PRA) (44 U.S.C. 3501 *et seq.*).

DATES: Comments must be submitted by April 25, 2012.

ADDRESSES: Written comments may be submitted to the Desk Officer for the Department of the Interior (DOI) at the Office of Management and Budget (OMB) via email to *OIRA_DOCKET@omb.eop.gov* or via facsimile (202) 395–5806. Please also send a copy of your comments to Don Bieniewicz at DOI via email at *Donald_Bieniewicz@ios.doi.gov* or via facsimile (202) 208–4867.

FOR FURTHER INFORMATION CONTACT: Don Bieniewicz (202) 208–4915. You may also review the submitted ICR online at *http://www.reginfo.gov.* Follow the instructions to review Department of the Interior collections under review by OMB.

SUPPLEMENTARY INFORMATION:

I. Abstract

The information collection activity will garner qualitative customer and stakeholder feedback in an efficient, timely manner, in accordance with the Administration's commitment to improving service delivery. By qualitative feedback we mean information that provides useful insights on perceptions and opinions, but are not statistical surveys that yield quantitative results that can be generalized to the population of study. This feedback will provide insights into customer or stakeholder perceptions, experiences and expectations, provide an early warning of issues with service, or focus attention on areas where communication, training or changes in operations might improve delivery of products or services. These collections will allow for ongoing, collaborative and actionable communications between the Agency and its customers and stakeholders. It will also allow feedback to contribute directly to the improvement of program management.

Feedback collected under this generic clearance will provide useful information, but it will not yield data that can be generalized to the overall population. This generic clearance for qualitative information will not be used for quantitative information collections that are designed to yield reliably actionable results, such as monitoring trends over time or documenting program performance. Such data uses require more rigorous designs that address: the target population to which generalizations will be made, the sampling frame, the sample design (including stratification and clustering), the precision requirements or power calculations that justify the proposed sample size, the expected response rate, methods for assessing potential non-response bias, the protocols for data collection, and any testing procedures that were or will be undertaken prior to fielding the study.

II. Request for Comments

No comments were received in response to the 60-day notice published in the **Federal Register** of December 22, 2010 (75 FR 80542). We again request public comments on this proposed information collection. Your comments should address: (a) The necessity of the information collection for the proper performance of the agency, including whether the information will have practical utility; (b) the accuracy of our estimate of the burden; (c) ways we could enhance the quality, utility, and clarity of the information to be collected; and (d) ways we could minimize the burden of the collection on the respondents, such as through the use of automated collection techniques or other information technology.

A Federal agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid Office of Management and Budget control number.

III. Data

OMB Control Number: 1090—NEW.

Title: DOI Generic Clearance for the Collection of Qualitative Feedback on Agency Service Delivery.

Type of Review: New Collection.

Affected Public: Individuals and Households, Businesses and

Organizations, State, Local or Tribal Government.

Expected Annual Number of Activities: 400.

Annual Respondents: 100,000 for surveys, 60,000 for comment cards, 1,000 for focus groups.

Frequency of Response: Once per request.

Annual Responses: 100,000 for surveys, 60,000 for comment cards, 1,000 for focus groups.

Average Time per Response: 15 minutes for surveys, 2 minutes for comment cards, 2 hours for focus groups.

Estimated Total Annual Burden Hours: 29,000.

Dated: March 19, 2012.

Benjamin Simon,

Assistant Director, Office of Policy Analysis, U.S. Department of the Interior.

[FR Doc. 2012–7100 Filed 3–23–12; 8:45 am]

BILLING CODE 4310–RK–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[FWS–R9–IA–2012–N074; FXIA16710900000P5–123–FF09A30000]

Endangered Species; Receipt of Applications for Permit

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of receipt of applications for permit.

SUMMARY: We, the U.S. Fish and Wildlife Service, invite the public to comment on the following applications to conduct certain activities with endangered species. With some exceptions, the Endangered Species Act (ESA) prohibits activities with listed species unless Federal authorization is acquired that allows such activities.

DATES: We must receive comments or requests for documents on or before April 25, 2012.

ADDRESSES: Brenda Tapia, Division of Management Authority, U.S. Fish and Wildlife Service, 4401 North Fairfax Drive, Room 212, Arlington, VA 22203; fax (703) 358–2280; or email *DMAFR@fws.gov.*

FOR FURTHER INFORMATION CONTACT: Brenda Tapia, (703) 358–2104 (telephone); (703) 358–2280 (fax); *DMAFR@fws.gov* (email).

SUPPLEMENTARY INFORMATION:

I. Public Comment Procedures

A. How do I request copies of applications or comment on submitted applications?

Send your request for copies of applications or comments and materials concerning any of the applications to the contact listed under **ADDRESSES**. Please include the **Federal Register** notice publication date, the PRT-number, and the name of the applicant in your request or submission. We will not consider requests or comments sent to an email or address not listed under **ADDRESSES**. If you provide an email address in your request for copies of applications, we will attempt to respond to your request electronically.

Please make your requests or comments as specific as possible. Please confine your comments to issues for which we seek comments in this notice, and explain the basis for your comments. Include sufficient information with your comments to allow us to authenticate any scientific or commercial data you include.

The comments and recommendations that will be most useful and likely to influence agency decisions are: (1) Those supported by quantitative information or studies; and (2) Those that include citations to, and analyses of, the applicable laws and regulations. We will not consider or include in our administrative record comments we receive after the close of the comment period (see **DATES**) or comments delivered to an address other than those listed above (see **ADDRESSES**).

B. May I review comments submitted by others?

Comments, including names and street addresses of respondents, will be available for public review at the address listed under **ADDRESSES**. The public may review documents and other information applicants have sent in support of the application unless our allowing viewing would violate the Privacy Act or Freedom of Information Act. Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

II. Background

To help us carry out our conservation responsibilities for affected species, and in consideration of section 10(a)(1)(A) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*), along with Executive Order 13576, ''Delivering an Efficient, Effective, and Accountable Government,'' and the President's Memorandum for the Heads of Executive Departments and Agencies of January 21, 2009—Transparency and Open Government (74 FR 4685; January 26, 2009), which call on all Federal agencies to promote openness and transparency in Government by disclosing information to the public, we invite public comment on these permit applications before final action is taken.

III. Permit Applications

Applicant: University of California, UC Davis Stable Isotope Facility, Davis, CA; PRT–60610A

The applicant requests a permit to import biological specimens of loggerhead sea turtles (*Caretta caretta*), leatherback sea turtles (*Dermochelys coriacea*), and leatherback sea turtles from Argentina for the purpose of scientific research. This notification covers activities to be conducted by the applicant over a 5-year period.

Applicant: University of Georgia, College of Veterinary Medicine, Infectious Diseases Laboratory, Athens, GA; PRT–009445

The applicant requests a renewal of their permit to import tissue or blood samples of any avian species (class Aves), reptile species (class Reptilia), and any fish (within the taxonomic phylum Chordata), from worldwide locations for the purpose of diagnostic testing for infectious diseases/scientific research. This notification covers activities to be conducted by the applicant over a 5-year period.

Applicant: Harkey Ranch, Eldorado, TX; PRT–67611A

The applicant requests a captive-bred wildlife registration under 50 CFR 17.21(g) for the Eld's deer (*Rucervus eldii*), barasingha (*Rucervus duvaucelii*), Arabian oryx (*Oryx leucoryx*), scimitar-horned oryx (*Oryx dammah*), addax (*Addax nasomaculatus*), and Dama gazelle (*Nanger dama*), to enhance their propagation or survival. This notification covers activities to be conducted by the applicant over a 5-year period.

Applicant: Michelle Rod Crawford, Sugarland, TX; PRT–67541A

The applicant requests a captive-bred wildlife registration under 50 CFR 17.21(g) for the scimitar-horned oryx (*Oryx dammah*), to enhance their propagation or survival. This

notification covers activities to be conducted by the applicant over a 5-year period.

Applicant: Michelle Rod Crawford, Sugarland, TX; PRT–67542A

The applicant requests a permit authorizing interstate and foreign commerce, export, and cull of excess scimitar-horned oryx (*Oryx dammah*), from the captive herd maintained at their facility, for the purpose of enhancement of the survival of the species. This notification covers activities to be conducted by the applicant over a 5-year period.

Applicant: Earth Promise Inc., Fossil Rim Wildlife Center, Glen Rose, TX; PRT–726004

The applicant requests renewal and amendment of their captive-bred wildlife registration under 50 CFR 17.21(g) to add the family Bovidae to the families Equidae, and Felidae. This notification covers activities to be conducted by the applicant over a 5-year period.

Applicant: Jay Russo, Katy, TX; PRT–819300

The applicant requests renewal of their captive-bred wildlife registration under 50 CFR 17.21(g) for radiated tortoise (*Astrochelys radiata*), to enhance their propagation or survival. This notification covers activities to be conducted by the applicant over a 5-year period.

Applicant: James Thompson, Houston TX; PRT–67603A

The applicant requests a captive-bred wildlife registration under 50 CFR 17.21(g) for the scimitar-horned oryx (*Oryx dammah*), to enhance their propagation or survival. This notification covers activities to be conducted by the applicant over a 5-year period.

Applicant: Georgia Aquarium, Atlanta, GA; PRT–67609A

The applicant requests a captive-bred wildlife registration under 50 CFR 17.21(g) for the jackass penguin (*Spheniscus demersus*) to enhance their propagation or survival. This notification covers activities to be conducted by the applicant over a 5-year period.

Applicant: Lionshare Farm Zoological LLC, Greenwich, CT; PRT–195196

The applicant requests renewal of their captive-bred wildlife registration under 50 CFR 17.21(g) for the following families, genus, and species, to enhance their propagation or survival. This notification covers activities to be conducted by the applicant over a 5-year period.

Families:
- Bovidae
- Hylobatidae
- Tapiridae

Species:
- Ring-tailed lemur (*Lemur catta*)
- Black lemur (*Eulemur macaco*)
- Black and white ruffed lemur (*Varecia variegata*)
- Cotton-headed tamarin (*Saguinus oedipus*)
- Mandrill (*Mandrillus sphinx*)
- Diana monkey (*Cercopithecus diana*)
- Bornean orangutan (*Pongo pygmaeus*)
- Snow leopard (*Uncia uncia*)
- Leopard (*Panthera pardus*)
- Grevy's zebra (*Equus grevyi*)
- Galapagos tortoise (*Chelonoidis nigra*)
- Radiated tortoise (*Astrochelys radiata*)

Applicant: Dakota Resources, Inc., Midland, TX; PRT–67605A

The applicant requests a captive-bred wildlife registration under 50 CFR 17.21(g) for the addax (*Addax nasomaculatus*), to enhance their propagation or survival. This notification covers activities to be conducted by the applicant over a 5-year period.

Applicant: Dakota Resources, Inc., Midland, TX; PRT–67606A

The applicant requests a permit authorizing interstate and foreign commerce, export, and cull of excess addax (*Addax nasomaculatus*), from the captive herd maintained at their facility, for the purpose of enhancement of the survival of the species. This notification covers activities to be conducted by the applicant over a 5-year period.

Applicant: Wayne Hahn, Hollywood, SC; PRT–785931

The applicant requests renewal of their captive-bred wildlife registration under 50 CFR 17.21(g) for golden parakeet (*Guarouba guarouba*) to enhance their propagation or survival. This notification covers activities to be conducted by the applicant over a 5-year period.

Applicant: Jack Phillips, Gladewater, TX; PRT–195823

The applicant requests amendment of their captive-bred wildlife registration under 50 CFR 17.21(g) to add scimitar-horned oryx (*Oryx dammah*) and addax (*Addax nasomaculatus*), to enhance their propagation or survival. This notification covers activities to be conducted by the applicant over a 5-year period.

Applicant: Jack Phillips, Gladewater, TX; PRT–67438A

The applicant requests a permit authorizing interstate and foreign commerce, export, and cull of excess scimitar-horned oryx (*Oryx dammah*) and addax (*Addax nasomaculatus*), from the captive herd maintained at their facility, for the purpose of enhancement of the survival of the species. This notification covers activities to be conducted by the applicant over a 5-year period.

Applicant: Feld Entertainment, Inc., Vienna, VA; PRT–59285A, 65776A, 65778A, 65780A, 65781A, 65782A, 65783A, 65785A, 65787A, 65789A, 657190A, 65792A, 65793A, 65796A, 65797A, 65800A, 66545A, 66546A, 66547A, 66548A, 66549A, and 66550A

The applicant request permits to export, re-export, and re-import captive-born tigers (*Panthera tigris*) and Asian elephants (*Elephas maximus*) to worldwide locations for the purpose of enhancement of the species through conservation education. This notification covers activities to be conducted by the applicant over a 3-year period and the import of any potential progeny born while overseas. The permit numbers and animals are:

Tigers:
- Julie—65793A
- Bali—65782A
- Blanca—65783A
- Della—65785A
- Dragon—65787A
- Govinda—65789A
- India—65790A
- Isis—65792A
- Katana—65796A
- Kimba—65797A
- Mika—65800A
- Tasha—66550A
- Tyra—66549A
- Singapur—66547A
- Princess—66545A
- Sundrum—66546A
- Rambo—66548A

Asian elephants:
- Asia—59285A
- Luna—65776A
- Tonka—65778A
- Banko—657808
- Siam II—65781A

Multiple Applicants

The following applicants each request a permit to import the sport-hunted trophy of one male bontebok (*Damaliscus pygargus pygargus*) culled from a captive herd maintained under the management program of the Republic of South Africa, for the purpose of enhancement of the survival of the species.

Applicant: James Young, Issaquah, WA; PRT–68172A

Applicant: James McNicol, Chandler, AZ; PRT–66555A

Brenda Tapia,

Program Analyst/Data Administrator, Branch of Permits, Division of Management Authority.

[FR Doc. 2012–7094 Filed 3–23–12; 8:45 am]

BILLING CODE 4310–55–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[FWS–R9–FHC–2011–N244; 94300–1122–0000–Z2]

RIN 1018–AX45

Fisheries and Habitat Conservation and Migratory Birds Programs; Final Land-Based Wind Energy Guidelines

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of availability.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce the availability of the final voluntary Land-Based Wind Energy Guidelines (Guidelines). These Guidelines supersede the Service's 2003 voluntary interim guidelines for land-based wind energy development. They respond to accelerated development of land-based wind energy generation projects in the United States. These voluntary Guidelines provide developers and agency staff with an iterative process to make sound decisions in selecting sites to avoid, minimize and compensate for adverse effects to wildlife, particularly birds and bats, and their habitats resulting from construction, operation, and maintenance of land-based wind energy facilities.

DATES: These voluntary Guidelines are effective March 26, 2012.

ADDRESSES: The Guidelines may be downloaded from *http://www.fws.gov/windenergy*. To request a copy of the draft Guidelines by U.S. Mail, write: U.S. Fish and Wildlife Service, 4401 North Fairfax Drive; Room 840, Arlington, VA 22203. You may also send an email request to: *windenergy@fws.gov.* Please specify whether you want to receive a hard copy by U.S. mail or an electronic copy by email.

FOR FURTHER INFORMATION CONTACT: Christy Johnson-Hughes, Division of Habitat and Resource Conservation, U.S. Fish and Wildlife Service, Department of the Interior, (703) 358–1922. Individuals who are hearing-impaired or speech-impaired may call the Federal Relay Service at 1–800–877–8337 for TTY assistance, 24 hours a day, 7 days a week.

SUPPLEMENTARY INFORMATION: The mission of the U.S. Fish and Wildlife Service is to work with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people. As part of this mission, we implement statutes including the Endangered Species Act (ESA; 16 U.S.C. 1531 *et seq.*), the Migratory Bird Treaty Act (MBTA; 16 U.S.C. 703–711), and the Bald and Golden Eagle Protection Act (BGEPA; 16 U.S.C. 668–668d). These statutes prohibit taking of federally listed species, migratory birds, and eagles unless otherwise authorized.

Increased energy demands and the nationwide goal to increase energy production from renewable sources have intensified the development of renewable energy facilities, including wind energy. The Service supports renewable energy development that is compatible with wildlife conservation.

The voluntary Guidelines will provide Service staff, developers, landowners and other stakeholders with a tool to assist in avoiding, minimizing, and compensating for significant adverse impacts to wildlife and their habitats. Adherence to the Guidelines is voluntary and does not relieve any individual, company, or agency of the responsibility to comply with laws and regulations. However, if a violation of law occurs, the Service will consider a developer's documented efforts to communicate with the Service and adhere to the Guidelines. The Guidelines include a Communications Protocol that provides guidance to both developers and Service personnel regarding expectations of appropriate communication and documentation.

The Service anticipates that these Guidelines, when used in concert with appropriate regulatory tools and other existing policies, provide the best practical approach for wildlife conservation.

Background

In July 2003, the Service released voluntary interim guidelines for land-based wind energy projects to assist developers in avoiding, minimizing, and/or compensating for effects to wildlife and their habitats related to land-based wind energy facilities. In 2007, the Secretary of the Interior (Secretary) established the Wind Turbine Guidelines Advisory Committee (Committee) under the Federal Advisory Committee Act (5 U.S.C. App.). The Committee submitted final recommendations to the Secretary on March 4, 2010. The Service appreciates all the time and effort that members of the Committee devoted to developing their recommendations, as well as since that time, as the Service developed these final Guidelines. The Service used the recommendations as a basis to develop the Service's draft Guidelines, which we circulated for comment in February 2011 (76 FR 9590, February 18, 2011).

We announced several opportunities for the public to attend Committee meetings and to submit comments or otherwise participate in the development of the Guidelines as follows:

Federal Register citation	Date of publication	Purpose of notice
76 FR 18238	April 1, 2011	Announced Committee meeting of April 27, 2011.
76 FR 20006	April 11, 2011	Announced availability of teleconference line for April 27, 2011, Committee meeting.
76 FR 38677	July 1, 2011	Announced Committee meeting of July 20–21, 2011.
76 FR 48174	August 8, 2011	Announced Committee meeting of August 23, 2011.
76 FR 54481	September 1, 2011	Announced Committee meeting of September 20–21, 2011.

The Service received more than 30,000 comments (summarized below) on the draft Guidelines from a wide range of interests, including Federal, State, and local agencies; tribes; wind energy developers; utilities; national and local wildlife conservation organizations; universities; and concerned citizens. The Service made

subsequent revisions of draft Guidelines available on July 13, 2011, and September 13, 2011, for additional public comment. Following circulation of both revised drafts, we reconvened the Committee to obtain input from Committee members as well as the public attending the Committee meetings (July 20–21 and September 20–21, 2011). Approximately an additional 1,000 comments were received on the revised drafts.

The final Guidelines incorporate elements from the Committee's recommendations, the draft Guidelines, as well as extensive public comment received during comment periods and the public Committee meetings. The majority of the comments focused on either the need to make the Guidelines mandatory or to keep them strictly voluntary. The following is a succinct summary of comments received and our responses.

Comment: The Service received a large number of comments stating that the Guidelines should be made mandatory. We also received a large number of comments supporting voluntary Guidelines.

Response: The Service believes that voluntary initiatives to avoid and minimize impacts to species of concern can be effective. The wind industry has clearly expressed its willingness to take seriously the need to site and operate projects in a responsible manner. Furthermore, under existing authorities, the Service cannot mandate compliance with the Guidelines as currently written. Mandatory application would require a significant narrowing of the scope of the Guidelines. As currently written, the Guidelines contemplate a process in which developers consider proposed wind energy projects in the context of the entire landscape, focusing on species and habitats that may be significantly impacted by their proposed project. The Guidelines anticipate that developers will include in their review species beyond the scope of Service jurisdiction, such as prairie chickens and non-ESA-listed bat species, which can be negatively affected by wind energy development. The Guidelines also contemplate that developers will include in their review impacts to rare habitats that are currently unprotected but that are important to conserve. The Service believes that the comprehensive approach described by the Guidelines in combination with use of existing tools such as Habitat Conservation Plans, Bird and Bat Conservation Strategies, and Eagle Conservation Plans will provide robust conservation of wildlife and their habitats. If appropriate, based on experience gained under these Guidelines, the Service can revisit their voluntary nature in the future.

Comment: The Guidelines should clarify consultation requirements and Service decision-making.

Response: The final Guidelines clarify that wind energy developers may decide to move from one tier to the next, but that this decision should be made in two-way communication with Service field offices. The final Guidelines commit the Service to providing feedback to wind project developers within 60 days of receiving such communications, and to respond in writing to developers before or during Tier 3 of a project (prior to initiating construction) with any concerns or recommendations.

Comment: The Service received many comments supporting a phase-in period of 6 months to 2 years for currently operating projects and those under development. Other comments supported immediate use of the final Guidelines.

Response: The Service has decided not to ''phase-in'' the implementation of the Guidelines, but rather to employ them immediately with publication of this notice. To address concerns about the lack of a phase-in period, the final Guidelines clarify that: (a) All projects that commence after the effective date should apply them; (b) developers are not expected to go back to earlier tiers for projects in development or operation; and (c) operating projects should adhere to Tiers 4 and 5 as appropriate. The Service believes that because the Guidelines are voluntary, there is no need to delay implementation beyond publication. Many developers and the Service are currently discussing numerous wind energy projects and how to reduce the impacts of those projects on species of concern.

Comment: The Guidelines should include species-specific science information rather than have the information provided elsewhere, such as on the Service's Web site.

Response: While the draft version of the Guidelines did place species-specific information on the Service's Web site, this process was cumbersome for reviewers and inefficient for practitioners. Therefore, we moved the recommended methods and metrics to be used for bird and bat species back into the Guidelines in the Chapters focused on pre- and post-construction studies.

Comment: The Guidelines should discuss the appropriateness of the various methods and metrics available, rather than list them.

Response: The Service agreed with commenters that providing context and discussion of the methods and metrics within the Guidelines is helpful to the reader. The final Guidelines provide discussion of the various methods and metrics available for pre- and post-construction studies, as had been recommended by the Committee.

Comment: The Guidelines should be peer reviewed, and the Committee recommendations should also be peer reviewed.

Response: The draft Guidelines were peer reviewed by the Wildlife Society. We have posted the peer review on the FWS Wind Energy Web site. The Committee recommendations were not separately peer reviewed. The Service determined that it is not necessary to conduct a peer review on the recommendations prepared by the Committee because the final Guidelines have evolved since the recommendations were provided to the Secretary in 2010.

Comment: The Guidelines should differentiate between emerging issues and established science. Commenters felt that while there may be valid concern over certain issues such as the effects of wind turbine noise on wildlife, these issues have not been widely studied and are not yet understood well enough to be addressed by individual wind energy developers.

Response: Tiers 3 and 4 (pre- and post-construction studies and monitoring) point to topics typically considered when determining what to study, including: Collision, habitat loss and degradation, displacement and behavioral changes, and indirect effects. The Guidelines include collision and habitat loss as topics for wind project developers to assess and monitor in the tiered approach. Others, such as the effects of sound, are mentioned in Tier 5 in the context of research. These are topics that the Service would not expect a developer to assess except in rare circumstances. However, the tiered approach does not preclude them from consideration during preconstruction studies if they are determined to be a viable concern.

Comment: Several comments pertained to how the Service should incorporate new science as it becomes available. We received suggestions to create an advisory panel that meets annually; open any new information to public comment; and ensure that the addition of any new information conforms to the principles outlined in the Committee's recommendations.

Response: The final Guidelines do not establish an advisory panel to incorporate new information. A process

for recommending which new studies or methods/metrics developers should use is not identified in the Guidelines. The Service will consider the best way to incorporate new science as it becomes available.

Comment: The Guidelines should adopt a risk-based approach to study duration as opposed to requiring a minimum of 3 years of preconstruction studies.

Response: The Service received many differing opinions on the appropriate duration of preconstruction studies in Tier 3. While some felt that a minimum of 3 years is prohibitive, others felt that it was not long enough. The final Guidelines remove the default of 3 years of preconstruction monitoring and instead recommend that studies be of sufficient duration and intensity to ensure that adequate data are collected to characterize wildlife use of the proposed project area as determined in communication with the Service. This approach allows for data collection commensurate with the level of risk, as opposed to an across-the-board standard that does not take into consideration the circumstances at individual sites.

Comment: The scope of the Guidelines should be ''species of concern'' as originally used by the Committee in their recommendations, as opposed to ''fish, wildlife and their habitats.''

Response: After reviewing the definition of ''species of concern,'' the Service agrees that this term is most appropriate as it narrows the focus of developer's studies to species that may potentially be significantly impacted by a wind energy project. The final Guidelines use the term ''species of concern'' for scope of species covered.

Comment: The Guidelines should not apply to distributed and community-scale wind energy projects. The costs associated with adhering to the Guidelines are prohibitive for smaller scale projects and will stall or prevent the development of small-scale wind energy.

Response: The Service recognizes that studies have not shown small-scale wind energy projects to have significant adverse impacts to wildlife. However, the Service also recognizes that a poorly sited project, no matter the size, has the potential to cause significant impacts. For this reason, distributed and community-scale projects are not ''exempted'' from the Guidelines. The Guidelines are voluntary. No wind energy developer is bound to follow them. The final Guidelines clarify that, in most cases, small-scale wind energy projects will not have significant adverse impacts, but developers should still do a Tier 1 and/or Tier 2 analysis using publicly available information (e.g., internet searches) to ensure that the risk for potential impacts is low.

The final Guidelines preserve many elements from the previous drafts including descriptions of the information needed to identify, assess, mitigate, and monitor the potential adverse effects of wind energy projects on wildlife and their habitats; and flexibility to accommodate the unique circumstances of each project. The framework helps developers understand how to avoid or minimize effects to certain species, which is important for compliance with a number of laws, including MBTA, BGEPA, and ESA.

The levels of surveying, monitoring, assessing, and collecting other information will vary among different wind-energy projects due to the diverse geographic, climatological, and ecological features of potential wind development sites. Founded upon a ''tiered approach'' for assessing potential effects to species of concern and their habitats, the guidelines are intended to promote: Compliance with relevant laws and statutes; the use of scientifically rigorous survey, monitoring, assessment, and research designs proportionate to the potential risk to affected species; the accumulation of comparable data across the landscape; the identification of trends and patterns of effects; and, ultimately, the improved ability to predict and resolve effects locally, regionally, and nationally.

Authority: The authorities for this action are the Endangered Species Act of 1973 as amended (16 U.S.C. 1531 *et seq.*); the Migratory Bird Treaty Act of 1918 as amended (16 U.S.C. 703–711); and the Bald and Golden Eagle Protection Act of 1940, as amended (16 U.S.C. 668–668d).

Dated: March 20, 2012.

Daniel M. Ashe,

Director, U.S. Fish and Wildlife Service.

[FR Doc. 2012–7011 Filed 3–23–12; 8:45 am]

BILLING CODE 4310–55–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[FWS–R4–ES–2012–N032; FXES11130400000C2]

Recovery Plan for the Endangered Spigelia gentianoides (Gentian Pinkroot)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of document availability.

SUMMARY: We, the Fish and Wildlife Service, announce the availability of the final recovery plan for *Spigelia gentianoides* (Gentian pinkroot), a threatened species restricted to six locations within three counties in the Florida Panhandle and two counties in Alabama. The recovery plan includes specific recovery objectives and criteria to be met in order to reclassify this species from endangered to threatened status under the Endangered Species Act of 1973, as amended (Act).

ADDRESSES: You may obtain a copy of the recovery plan by contacting the Panama City Field Office (PCFO), by U.S. mail at U.S. Fish and Wildlife Service, 1601 Balboa Ave, Panama City, FL 32405, or by telephone at (850) 769–0552. Alternatively, you may visit the Fish and Wildlife Service's recovery plan Web site at *http://www.fws.gov/endangered/species/recovery-plans.html* or the PCFO Web site at *http://www.fws.gov/panamacity/listedplants.html.*

FOR FURTHER INFORMATION CONTACT: Dr. Vivian Negrón-Ortiz, at the above address, or by telephone at (850) 769–0552, ext. 231.

SUPPLEMENTARY INFORMATION:

Background

We listed *Spigelia gentianoides* (Gentian pinkroot) as an endangered species under the Act (16 U.S.C. 1531 *et seq.*) on November 26, 1990 (55 FR 49046). *Spigelia gentianoides* is a small herbaceous plant and has two varieties: Var. *gentianoides* is restricted to five locations within three counties in the Florida Panhandle and southern Alabama, and var. *alabamensis* is limited to Bibb County, Alabama. The loss or alteration of habitat is thought to be the primary reason for the species' decline. The extant plants of var. *gentianoides* are located in fire-dependent longleaf pine-wiregrass and pine-oak-hickory ecosystems. Much of this habitat has been reduced in its range, converted to pine plantation, and managed without fire. Variety *alabamensis* is a narrow endemic, restricted to the Bibb County Glades (open, almost treeless areas within woodlands). Some of the glades are owned and protected by The Nature Conservancy. However, this variety is threatened by potential development of privately owned glades.

Restoring an endangered or threatened animal or plant to the point where it is again a secure, self-sustaining member of its ecosystem is a primary goal of the endangered species program. To help guide the recovery effort, we are preparing recovery plans

for most listed species. Recovery plans describe actions considered necessary for conservation of the species, establish criteria for downlisting or delisting, and estimate time and cost for implementing recovery measures.

The Act requires the development of recovery plans for listed species, unless such a plan would not promote the conservation of a particular species. Section 4(f) of the Act requires us to provide a public notice and an opportunity for public review and comment during recovery plan development. We made the draft of this recovery plan available for public comment from March 23 through May 23, 2011 (76 FR 16439). We considered information we received during this public comment period and information from peer reviewers in our preparation of this final recovery plan. Some sections of the recovery plan were edited based on peer reviewer and public comments. However, no substantial changes were made to the final plan.

Recovery Plan Criteria

The goal of this plan is to provide a framework to conserve and recover *S. gentianoides* so it may be reclassified to threatened status. *Spigelia gentianoides* will be considered for reclassification to threatened status when:

- Extant populations and newly discovered sites are identified and mapped;
- Inventories have been conducted across the species' historic sites and/or on new locations;
- Monitoring programs and management protocols on selected populations are established for 15 years to track threats to the species and its habitat;
- Extant populations located on public land are stable;
- The minimum viable population (MVP) size has been determined for each variety;
- Research on key aspects related to demography, reproductive biology, and seed ecology is accomplished; and
- Collect viable seeds from at least 50 percent of the populations for each variety and store them *ex situ* (off site—that is, in designated seed storage facilities).

In addition, the following specific actions must be completed for each variety:

○ Var. *gentianoides:*

■ Sizes of populations # 1 to # 4 (out of 5) are increased via prescribed burns until plant numbers are stabilized;

■ At least one new population is found; and

■ At least one population is re-established within the historic range.

○ Var. *alabamensis:*

■ Fifty percent of the Bibb County glades known to support the variety on private land are protected through conservation agreements, easements, or land acquisition.

As reclassification criteria are met the status of the species will be reviewed, and the species will be considered for reclassification to threatened status.

Defining delisting criteria is not possible at this time, given the current low numbers of populations and individuals, lack of information about the species' biology, and the magnitude of current threats from development. Reclassification criteria will be reevaluated and delisting criteria will be created as new scientific data and information become available and recovery actions are implemented.

Authority

The authority for this action is section 4(f) of the Endangered Species Act, 16 U.S.C. 1533(f).

Dated: January 24, 2012.

Mark J. Musaus,

Acting Regional Director, Southeast Region.

[FR Doc. 2012–7180 Filed 3–23–12; 8:45 am]

BILLING CODE 4310–55–P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[LLCO956000.L14200000 BJ0000]

Notice of Filing of Plats

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice of filing of plats; Colorado.

SUMMARY: The Bureau of Land Management (BLM) Colorado State Office is publishing this notice to inform the public of the intent to file the land survey plats listed below, and to afford all affected parties a proper period of time to protest this action, prior to the plat filing.

DATES: Unless there are protests of this action, the filing of the plats described in this notice will happen on April 25, 2012.

ADDRESSES: BLM Colorado State Office, Cadastral Survey, 2850 Youngfield Street, Lakewood, Colorado 80215–7093.

FOR FURTHER INFORMATION CONTACT: Randy Bloom, Chief Cadastral Surveyor for Colorado, (303) 239–3856.

SUPPLEMENTARY INFORMATION: The plat and field notes of the dependent resurvey in Township 10 South, Range 70 West, Sixth Principal Meridian, Colorado, were accepted on January 13, 2012.

The plat and field notes of the dependent resurvey and survey in Township 9 South, Range 71 West, Sixth Principal Meridian, Colorado, were accepted on January 13, 2012.

The plat and field notes of the dependent resurvey and survey in Township 10 South, Range 71 West, Sixth Principal Meridian, Colorado, were accepted on January 13, 2012.

The supplemental plat, in 4 sheets, of Section 8, in Township 1 North, Range 71 West, Sixth Principal Meridian, Colorado, was accepted on January 20, 2012.

The supplemental plat of Section 13, in Township 1 North, Range 72 West, Sixth Principal Meridian, Colorado, was accepted on January 27, 2012.

The plat incorporating the field notes, in 2 sheets, of the dependent resurvey in Township 51 North, Range 5 East, New Mexico Principal Meridian, Colorado, was accepted on February 3, 2012.

The plat and field notes of the section subdivision and survey in Township 7 South, Range 95 West, Sixth Principal Meridian, Colorado, were accepted on February 8, 2012.

The plat and field notes of the corrective dependent resurvey in Township 36 North, Range 11 West, New Mexico Principal Meridian, Colorado, were accepted on February 21, 2012.

Randy Bloom,

Chief Cadastral Surveyor for Colorado.

[FR Doc. 2012–7163 Filed 3–23–12; 8:45 am]

BILLING CODE 4310–JB–P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[LLCO956000.L14200000 BJ0000]

Notice of Filing of Plats

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice of Filing of Plats; Colorado.

SUMMARY: The Bureau of Land Management (BLM) Colorado State Office is publishing this notice to inform the public of the filing of the land survey plats listed below.

DATES: The plats described in this notice were filed on March 12, 2012.

ADDRESSES: BLM Colorado State Office, Cadastral Survey, 2850 Youngfield Street, Lakewood, Colorado 80215–7093.

FOR FURTHER INFORMATION CONTACT: Randy Bloom, Chief Cadastral Surveyor for Colorado, (303) 239–3856.

SUPPLEMENTARY INFORMATION: The supplemental plat of Sections 32 and 33, in Township 12 South, Range 90 West, Sixth Principal Meridian, Colorado, was accepted and filed on March 12, 2012.

The supplemental plat of Section 5, in Township 13 South, Range 90 West, Sixth Principal Meridian, Colorado, was accepted and filed on March 12, 2012.

Randy Bloom,

Chief Cadastral Surveyor for Colorado.

[FR Doc. 2012–7143 Filed 3–23–12; 8:45 am]

BILLING CODE 4310–JB–P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[WY–923–1310–FI; WYW163161]

Notice of Proposed Reinstatement of Terminated Oil and Gas Lease WYW163161, Wyoming

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice.

SUMMARY: Under the provisions of the Mineral Leasing Act of 1920, as amended, the Bureau of Land Management (BLM) received a petition for reinstatement from Larry Napolitano, Twylla Napolitano, Michael K. Smith, and Patricia J. Smith for competitive oil and gas lease WYW163161 for land in Niobrara County, Wyoming. The petition was filed on time and was accompanied by all the rentals due since the date the lease terminated under the law.

FOR FURTHER INFORMATION CONTACT: Bureau of Land Management, Julie L. Weaver, Chief, Fluid Minerals Adjudication, at (307) 775–6176. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339 to contact the above individual during normal business hours. The FIRS is available 24 hours a day, 7 days a week, to leave a message or question with the above individual. You will receive a reply during normal business hours.

SUPPLEMENTARY INFORMATION: The lessees have agreed to the amended lease terms for rentals and royalties at rates of $10 per acre or fraction thereof, per year and 16⅔ percent, respectively. The lessees have paid the required $500 administrative fee and $159 to reimburse the Department for the cost of this **Federal Register** notice. The lessees have met all the requirements for reinstatement of the lease as set out in Sections 31(d) and (e) of the Mineral Lands Leasing Act of 1920 (30 U.S.C. 188), and the BLM is proposing to reinstate lease WYW163161 effective June 1, 2011, under the original terms and conditions of the lease and the increased rental and royalty rates cited above. The BLM has not issued a valid lease to any other interest affecting the lands.

Julie L. Weaver,

Chief, Branch of Fluid Minerals Adjudication.

[FR Doc. 2012–7225 Filed 3–23–12; 8:45 am]

BILLING CODE 4310–22–P

DEPARTMENT OF JUSTICE

[OMB Number 1105–0025]

Agency Information Collection Activities: Proposed Collection; Comments Requested

ACTION: 30-Day Notice of Information Collection Under Review: Federal Coal Lease Request.

The Department of Justice (DOJ), Antitrust Division (ATR), will be submitting the following information collection request to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995. The proposed information collection is published to obtain comments from the public and affected agencies. This proposed information collection was previously published in the **Federal Register** Volume 77, Number 14, page 3282 on January 23, 2012, allowing for a 60 day comment period.

The purpose of this notice is to allow for an additional 30 days for public comment until April 25, 2012. This process is conducted in accordance with 5 CFR 1320.10.

If you have comments (especially regarding the estimated public burden or associated response time), suggestions, or need a copy of the proposed information collection instrument with instructions or additional information, please contact Jill Ptacek, Antitrust Division, United States Department of Justice, 450 5th Street NW., Suite 8000, Washington, DC 20530.

Written comments and suggestions from the public and affected agencies concerning the proposed collection of information are encouraged. Your comments should address one or more of the following four points:

—Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

—The accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

—The quality, utility and clarity of the information to be collected; and

—How to minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Overview of This Information Collection

(1) *Type of Information Collection:* Extension of a currently approved collection.

(2) *Title of the Form/Collection:* Federal Coal Lease Reserves.

(3) *Agency form number, if any, and the applicable component of the Department of Justice sponsoring the collection:* Form Numbers: ATR–139 and ATR–140, Antitrust Division, Department of Justice.

(4) *Affected public who will be asked or required to respond, as well as brief abstract:* Primary: Business or other for Profit. Other: None. The Department of Justice evaluates the competitive impact of issuances, transfers and exchanges of federal coal leases. These forms seek information regarding a prospective coal lessee's existing coal reserves. The Department uses this information to determine whether the issuance, transfer or exchange of the federal coal lease is consistent with the antitrust laws.

(5) *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond;* It is estimated that 20 respondents will complete each form, with each response taking approximately two hours.

(6) *An estimate of the total public burden (in hours) associated with the collection:* There are an estimated 40 annual burden hours associated with this collection, in total.

If additional information is required, contact: Jerri Murray, Department Clearance Officer, United States Department of Justice, Justice Management Division, Policy and Planning Staff, Two Constitution

Square, 145 N Street NE., Washington, DC 20530.

Jerri Murray,

Department Clearance Officer, PRA, United States Department of Justice.

[FR Doc. 2012–7170 Filed 3–23–12; 8:45 am]

BILLING CODE 4410–10–P

DEPARTMENT OF JUSTICE

[OMB Number 1123–0009]

Agency Information Collection Activities: Information Collection Renewal; Comments Requested: Inspection of Records Relating to Visual Depictions of Simulated Sexually Explicit Performances

ACTION: 30-Day Notice of Information Collection.

The Department of Justice (DOJ), Criminal Division, Child Exploitation and Obscenity Section (CEOS) will be submitting the following information collection renewal to the Office of Management and Budget (OMB) for review and clearance in accordance with the Paperwork Reduction Act of 1995. The information collection renewal is published to obtain comments from the public and affected agencies. This information collection renewal was previously published in the **Federal Register** Volume 77, Number 13, pages 3003–04, on January 20, 2012, allowing for a 60-day comment period.

The purpose of this notice is to allow for an additional 30 days for public comment until April 25, 2012. This process is conducted in accordance with 5 CFR 1320.10.

If you have comments especially on the estimated number of respondents, estimated public burden or associated response time, suggestions, or need additional information, please contact Andrew G. Oosterbaan, Chief, Child Exploitation and Obscenity Section, Criminal Division, United States Department of Justice, Washington, DC 20530, email: *admin.ceos@usdoj.gov,* phone: (202) 514–5780. This is not a toll-free number.

Written comments and suggestions from the public and affected agencies concerning the collection of information are encouraged. Your comments should address one or more of the following four points:

(1) Whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(2) The accuracy of the agency's estimate of the burden of the collection of information, including the validity of the methodology and assumptions used;

(3) How to enhance the quality, utility, and clarity of the information to be collected; and

(4) How to minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Summary of Information Collection

(1) *Type of Information Collection:* Renewal of a currently approved collection.

(2) *Title:* Inspection of Records Relating to Visual Depictions of Simulated Sexually Explicit Performances.

(3) *Agency form number, if any:* None.

(4) *Affected public who will be asked or required to respond, as well as a brief abstract:* Primary: Business or other for-profit. Other: None. Abstract: This is a renewal of an existing information collection implementing the recordkeeping, labeling, and inspection requirements of 28 CFR part 75, accounting for changes in the underlying statute made by Congress in enacting the Adam Walsh Child Protection and Safety Act of 2006.

Need for Collection

The information collection documents the recordkeeping, labeling, and inspection requirements for producers of visual depictions of actual and simulated sexually explicit conduct, and the certification regime for the exemption from these requirements, in certain circumstances, for producers of visual depictions of simulated sexually explicit conduct and visual depictions of actual sexually explicit conduct constituting the lascivious exhibition of the genitals or pubic area of a person. These statutory requirements of 28 CFR part 75, codified at 18 U.S.C. 2257 and 2257A, are designed to ensure that visual depictions of sexually explicit conduct are produced in accordance with laws and regulations, and without the involvement of minors under 18 years of age.

(5) An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond: The Department is unable to estimate with any precision the number of entities producing visual depictions of simulated sexually explicit conduct. As a partial indication, the Department's 2008 regulatory review, including the information collection request and PRA Supporting Statement (RIN 1105–AB19), cited data collected by the U.S. Census Bureau in 2002. Employing the same method of analysis, according to data collected by the U.S. Census Bureau in 2007, there were 11,974 establishments engaged in motion picture and video production in the United States. Based on a rough assumption that 10% of the establishments are engaged in the production of visual depictions of simulated sexually explicit conduct, the Department estimates that approximately 1,974 motion picture and video producing establishments are required to comply with these statutory requirements. (The Department does not Additionally, the statute provides an exemption from these requirements applicable in certain circumstances, and it requires producers to submit certifications to qualify for this exemption. From March 18, 2009, the effective date of the certification regime, to the present, the Department has received approximately 865 certification letters. For the entities that qualify for the exemption, the Department estimates that it would take less than 20 hours per year to prepare the biennial certification required for the exemption.

(6) An estimate of the total public burden (in hours) associated with the collection: If OMB were to assume that 3,000,000 visual depictions of simulated sexually explicit conduct are created each year and that it requires 6 minutes to complete the recordkeeping requirement for each depiction, the recordkeeping requirements would impose a burden of 300,000 hours. If, however, OMB were to assume that producers of 90% of these depictions qualify for the statutory exemption from these requirements, the requirements would only impose a burden of 30,000 hours (These estimates were included in the Department's 2008 regulatory review, including the information collection request and PRA Supporting Statement (RIN 1105–AB19). The Department does not certify the accuracy of these numbers.)

If additional information is required contact: Jerri Murray, Department Clearance Officer, Policy and Planning Staff, Justice Management Division, Department of Justice, Two Constitution Square, Room 2E–508, 145 Street NE., Washington, DC 20530.

Jerri Murray,

Department Clearance Officer, PRA, United States Department of Justice.

[FR Doc. 2012–7174 Filed 3–23–12; 8:45 am]

BILLING CODE 4410–CW–P

DEPARTMENT OF JUSTICE

Bureau of Alcohol, Tobacco, Firearms and Explosives

[OMB Number 1140–0002]

Agency Information Collection Activities: Proposed Collection; Comments Requested: Application for Restoration of Firearms Privileges

ACTION: 60-Day Notice of Information Collection Under Review.

The Department of Justice (DOJ), Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), will be submitting the following information collection request to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995. The proposed information collection is published to obtain comments from the public and affected agencies. Comments are encouraged and will be accepted for ''sixty days'' until May 25, 2012. This process is conducted in accordance with 5 CFR 1320.10.

If you have comments especially on the estimated public burden or associated response time, suggestions, or need a copy of the proposed information collection instrument with instructions or additional information, please contact Stuart Lowrey, Chief, Firearms Operations Division at *fipb-informationcollection@atf.gov.*

Request written comments and suggestions from the public and affected agencies concerning the proposed collection of information are encouraged. Your comments should address one or more of the following four points:

—Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

—Evaluate the accuracy of the agencies estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

—Enhance the quality, utility, and clarity of the information to be collected; and

—Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Overview of this information collection:

(1) *Type of Information Collection:* Extension of a currently approved collection.

(2) *Title of the Form/Collection:* Application For Restoration of Firearms Privileges.

(3) *Agency form number, if any, and the applicable component of the Department of Justice sponsoring the collection:* Form Number: ATF F 3210.1, Bureau of Alcohol, Tobacco, Firearms and Explosives.

(4) *Affected public who will be asked or required to respond, as well as a brief abstract:* Primary: Individuals or households. Other: Business or other for profit. Certain categories of persons are prohibited from possessing firearms. ATF F 3210.1, Application For Restoration of Firearms Privileges is the basis for ATF investigating the merits of an applicant to have his/her rights restored.

(5) *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond:* It is estimated that 250 respondents will complete a 30 minute form.

(6) *An estimate of the total public burden (in hours) associated with the collection:* There are an estimated 125 annual total burden hours associated with this collection.

If additional information is required contact: Jerri Murray, Department Clearance Officer, Policy and Planning Staff, Justice Management Division, Department of Justice, Two Constitution Square, Room 2E–508, 145 N Street NE., Washington, DC 20530.

Jerri Murray,

Department Clearance Officer, PRA, United States Department of Justice.

[FR Doc. 2012–7187 Filed 3–23–12; 8:45 am]

BILLING CODE 4410–FY–P

DEPARTMENT OF JUSTICE

Bureau of Alcohol, Tobacco, Firearms and Explosives

[OMB Number 1140–0052]

Agency Information Collection Activities: Proposed Collection; Comments Requested: Strategic Planning Environmental Assessment Outreach

ACTION: 60-Day Notice of Information Collection Under Review:

The Department of Justice (DOJ), Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), will be submitting the following information collection request to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995. The proposed information collection is published to obtain comments from the public and affected agencies. Comments are encouraged and will be accepted for ''sixty days'' until May 25, 2012. This process is conducted in accordance with 5 CFR 1320.10.

If you have comments especially on the estimated public burden or associated response time, suggestions, or need a copy of the proposed information collection instrument with instructions or additional information, please contact Jacqueline Pitts, Office of Strategic Management, 99 New York Avenue NE.,Washington, DC 20226.

Written comments and suggestions from the public and affected agencies concerning the proposed collection of information are encouraged. Your comments should address one or more of the following four points:

—Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

—Evaluate the accuracy of the agencies estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

—Enhance the quality, utility, and clarity of the information to be collected; and

—Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Overview of this information collection:

(1) *Type of Information Collection:* Extension of a currently approved collection.

(2) *Title of the Form/Collection:* Strategic Planning Environmental Assessment Outreach.

(3) *Agency form number, if any, and the applicable component of the Department of Justice sponsoring the collection:* Form Number: None. Bureau of Alcohol, Tobacco, Firearms and Explosives.

(4) *Affected public who will be asked or required to respond, as well as a brief abstract:* Primary: Business or other for-profit. Other: Not-for-profit institutions,

Federal Government, State, Local, or Tribal Government. Under the provisions of the Government Performance and Results Act, Federal agencies are directed to improve their effectiveness and public accountability by promoting a new focus on results, service quality, and customer satisfaction. This act requires that agencies update and revise their strategic plans every three years. The Strategic Planning Office at ATF will use the voluntary outreach information to determine the agency's internal strengths and weaknesses.

(5) *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond:* It is estimated that 1,500 respondents will complete a 18 minute questionnaire.

(6) *An estimate of the total public burden (in hours) associated with the collection:* There are an estimated 450 annual total burden hours associated with this collection.

If additional information is required contact: Jerri Murray, Department Clearance Officer, Policy and Planning Staff, Justice Management Division, Department of Justice, Two Constitution Square, Room 2E–508, 145 N Street NE., Washington, DC 20530.

Jerri Murray,

Department Clearance Officer, PRA, United States Department of Justice.

[FR Doc. 2012–7189 Filed 3–23–12; 8:45 am]

BILLING CODE 4410–FY–P

DEPARTMENT OF JUSTICE

Bureau of Alcohol, Tobacco, Firearms and Explosives

[OMB Number 1140–0039]

Agency Information Collection Activities: Proposed Collection; Comments Requested: Federal Firearms Licensee Firearms Inventory Theft/Loss Report

ACTION: 60-Day Notice of Information Collection Under Review.

The Department of Justice (DOJ), Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), will be submitting the following information collection request to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995. The proposed information collection is published to obtain comments from the public and affected agencies. Comments are encouraged and will be accepted for ''sixty days'' until May 25, 2012. This process is conducted in accordance with 5 CFR 1320.10.

If you have comments especially on the estimated public burden or associated response time, suggestions, or need a copy of the proposed information collection instrument with instructions or additional information, please contact Ben Hayes, Chief, Law Enforcement Support Branch, National Tracing Center, 244 Needy Road, Martinsburg, WV 25405.

Written comments and suggestions from the public and affected agencies concerning the proposed collection of information are encouraged. Your comments should address one or more of the following four points:

—Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

—Evaluate the accuracy of the agencies estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

—Enhance the quality, utility, and clarity of the information to be collected; and

—Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Overview of this information collection:

(1) *Type of Information Collection:* Extension of a currently approved collection.

(2) *Title of the Form/Collection:* Federal Firearms Licensee Firearms Inventory Theft/Loss Report.

(3) *Agency form number, if any, and the applicable component of the Department of Justice sponsoring the collection:* Form Number: ATF F 3310.11. Bureau of Alcohol, Tobacco, Firearms and Explosives.

(4) *Affected public who will be asked or required to respond, as well as a brief abstract:* Primary: Individuals or households. Other: Business or other for-profit. Authorization of this form is requested as the Violent Crime Control and Law Enforcement Act requires Federal firearms licensees to report to the Bureau of Alcohol, Tobacco, Firearms and Explosives and to the appropriate local authorities any theft or loss of a firearm from the licensee's inventory or collection, within a specific time frame after the theft or loss is discovered.

(5) *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond:* It is estimated that 4,000 respondents will complete a 24 minute form.

(6) *An estimate of the total public burden (in hours) associated with the collection:* There are an estimated 1,600 annual total burden hours associated with this collection.

If additional information is required contact: Jerri Murray, Department Clearance Officer, Policy and Planning Staff, Justice Management Division, Department of Justice, Two Constitution Square, Room 2E–508, 145 N Street NE., Washington, DC 20530.

Jerri Murray,

Department Clearance Officer, PRA, United States Department of Justice.

[FR Doc. 2012–7188 Filed 3–23–12; 8:45 am]

BILLING CODE 4410–FY–P

DEPARTMENT OF JUSTICE

Bureau of Alcohol, Tobacco, Firearms and Explosives

[OMB Number 1140–0050]

Agency Information Collection Activities: Proposed Collection; Comments Requested; Identification Markings Placed on Firearms

ACTION: 30-Day Notice of Information Collection.

The Department of Justice (DOJ), Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) will be submitting the following information collection request to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995. The proposed information collection is published to obtain comments from the public and affected agencies. This proposed information collection was previously published in the **Federal Register** Volume 77, Number 10, page 2320 on January, 17, 2012, allowing for a 60-day comment period.

The purpose of this notice is to allow for an additional 30 days for public comment until April 25, 2012. This process is conducted in accordance with 5 CFR 1320.10.

Written comments concerning this information collection should be sent to the Office of Information and Regulatory Affairs, Office of Management and Budget, Attn: DOJ Desk Officer. The best way to ensure your comments are

received is to email them to *oira_submission@omb.eop.gov* or fax to 202–395–7285. All comments should reference the eight digit OMB number for the collection or the title of the collection. If you have any questions concerning the collection, please contact John Spencer, *fire_tech@atf.gov.*

Written comments and suggestions from the public and affected agencies concerning the proposed collection of information are encouraged. Your comments should address one or more of the following four points:

—Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

—Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

—Enhance the quality, utility, and clarity of the information to be collected; and

—Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Summary of Collection

(1) *Type of Information Collection:* Extension of a currently approved collection.

(2) *Title of the Form/Collection:* Identification Markings Placed on Firearms.

(3) *Agency form number, if any, and the applicable component of the Department of Justice sponsoring the collection:* Form Number: None. Bureau of Alcohol, Tobacco, Firearms and Explosives.

(4) *Affected public who will be asked or required to respond, as well as a brief abstract:* Primary: Business or other for-profit. Other: None. Abstract:

Need for Collection

Each licensed firearms manufacturer or licensed importer must legibly identify each firearm by engraving, casting, stamping (impressing), or otherwise conspicuously placing on the frame or receiver an individual serial number. Also, ATF requires minimum height and depth requirements for identification markings placed on firearms.

(5) An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond: There will be an estimated 2,962 respondents who will take 5 seconds to mark the firearm.

(6) An estimate of the total burden (in hours) associated with the collection: There are an estimated 2,500 total burden hours associated with this collection.

If additional information is required contact: Jerri Murray, Department Clearance Officer, Policy and Planning Staff, Justice Management Division, Department of Justice, Two Constitution Square, Room 2E–508, 145 N Street NE., Washington, DC 20530.

Jerri Murray,

Department Clearance Officer PRA, United States Department of Justice.

[FR Doc. 2012–7173 Filed 3–23–12; 8:45 am]

BILLING CODE 4410–FY–P

DEPARTMENT OF JUSTICE

Bureau of Alcohol, Tobacco, Firearms and Explosives

[OMB Number 1140–0071]

Agency Information Collection Activities: Proposed Collection; Comments Requested: Notification to Fire Safety Authority of Storage of Explosive Materials

ACTION: 60-Day Notice of Information Collection Under Review.

The Department of Justice (DOJ), Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), will be submitting the following information collection request to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995. The proposed information collection is published to obtain comments from the public and affected agencies. Comments are encouraged and will be accepted for ''sixty days'' until May 25, 2012. This process is conducted in accordance with 5 CFR 1320.10.

If you have comments especially on the estimated public burden or associated response time, suggestions, or need a copy of the proposed information collection instrument with instructions or additional information, please contact William Miller, Chief, Explosives Industry Programs Branch at *eipb@atf.gov.*

Written comments and suggestions from the public and affected agencies concerning the proposed collection of information are encouraged. Your comments should address one or more of the following four points:

—Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

—Evaluate the accuracy of the agencies estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

—Enhance the quality, utility, and clarity of the information to be collected; and

—Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Overview of This Information Collection

(1) *Type of Information Collection:* Extension of a currently approved collection.

(2) *Title of the Form/Collection:* Notification to Fire Safety Authority of Storage of Explosive Materials.

(3) *Agency form number, if any, and the applicable component of the Department of Justice sponsoring the collection:* Form Number: None. Bureau of Alcohol, Tobacco, Firearms and Explosives.

(4) *Affected public who will be asked or required to respond, as well as a brief abstract:* Primary: Business or other for-profit. Other: Farms, State, Local, or Tribal Government, Individuals or households. The information is necessary for the safety of emergency response personnel responding to fires at sites where explosives are stored. The information is provided both orally and in writing to the authority having jurisdiction for fire safety in the locality in which explosives are stored.

(5) *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond:* It is estimated that 1,025 respondents will take 30 minutes to complete the notifications.

(6) *An estimate of the total public burden (in hours) associated with the collection:* There are an estimated 513 annual total burden hours associated with this collection.

If additional information is required contact: Jerri Murray, Department Clearance Officer, Policy and Planning Staff, Justice Management Division, Department of Justice, Two Constitution

Square, Room 2E–508, 145 N Street NE., Washington, DC 20530.

Jerri Murray,

Department Clearance Officer, PRA, United States Department of Justice.

[FR Doc. 2012–7190 Filed 3–23–12; 8:45 am]

BILLING CODE 4410–FY–P

DEPARTMENT OF JUSTICE

Drug Enforcement Administration

[Docket No. 11–1]

Morris W. Cochran, M.D.: Revocation of Registration

On September 22, 2010, I, the then-Deputy Administrator of the Drug Enforcement Administration, issued an Order to Show Cause and Immediate Suspension of Registration to Morris W. Cochran, M.D. (Respondent), of Birmingham, Alabama. The Order proposed the revocation of Respondent's DEA Certificate of Registration BC1701184, and the denial of any pending applications to renew or modify his registration, on the ground that his ''continued registration is inconsistent with the public interest.'' 21 U.S.C. 824(a)(4).

More specifically, the Order alleged that while Respondent is authorized to prescribe Suboxone and Subutex ''for maintenance or detoxification treatment pursuant to 21 U.S.C. 823(g)(2) under DEA identification number XC1701184,'' he had ''prescribed methadone,'' a schedule II controlled substance, ''to patients for the purpose of drug addiction treatment'' without the registration required under 21 U.S.C. 823(g)(1). ALJ Ex.1, at 1–2.

Next, the Order alleged that Respondent had prescribed both methadone and Suboxone, the latter being a Schedule III controlled substance, to numerous patients whose charts show that he ''did not obtain a prior medical history,'' that he ''did not perform an initial physical exam,'' that he ''established little or no basis for the diagnoses,'' and that he ''offered no other treatment other than prescribing controlled substances.'' *Id.* at 2. The Order further alleged that ''[s]uch prescribing was not for a legitimate medical purpose in the usual course of professional practice in violation of 21 CFR 1306.04(a), and in violation of Alabama Administrative Code 540–X–11)(1), which requires that a physician personally obtain an appropriate history, perform a physical exam, make a diagnosis and formulate a therapeutic plan before prescribing drugs to a patient.'' *Id.* Finally, the Order alleged that Respondent had ''continue to prescribe alprazolam, a schedule IV controlled substances depressant, to a patient after [the] patient file explicitly noted that the patient abused this drug.'' *Id.*

Based on the above, I concluded that Respondent's continued registration during the pendency of the proceeding ''constitute[d] an imminent danger to the public health and safety.'' *Id.* I therefore invoked my authority under 21 U.S.C. 824(d) and immediately suspended Respondent's registration.

Respondent requested a hearing on the allegations and the matter was placed on the docket of the Agency's Administrative Law Judges (ALJs). On November 2–4, 2010, an ALJ conducted a hearing in Birmingham, Alabama. ALJ Decision (also ALJ), at 3.

On January 5, 2011, the ALJ issued her decision which recommended that Respondent's registration be revoked. *Id.* at 51. Therein, the ALJ found that the Alabama Medical Board had not made a recommendation in the matter (factor one) and that Respondent has not been convicted of an offense related to the manufacture and distribution of controlled substances (factor three). *Id.* at 43, 48.

With respect to factors two (Respondent's experience in dispensing controlled substances) and four (Respondent's compliance with applicable laws related to controlled substances), the ALJ made extensive findings. First, the ALJ found that Respondent violated DEA regulations because he prescribed drugs other than Suboxone or Subutex on prescription forms that used only his Data Waiver (or X) number. ALJ at 43. The ALJ also found that Respondent ''improperly prescribed Suboxone for substance abuse using his regular DEA registration number rather than the required ''X'' number.'' *Id.*

Next, the ALJ found that Respondent prescribed methadone for detoxification and maintenance treatment without holding the separate registration required to do so under Federal law. ALJ at 43–45. The ALJ specifically rejected Respondent's testimony that he had prescribed methadone to nine patients to treat pain (which does not require a separate registration), noting that Respondent had initially told a DEA Investigator that he was prescribing methadone for detoxification purposes, that several patients who had received methadone had told the Investigator that they were being treated for substance abuse, and that several of the patients had come to Respondent's clinic ''directly after'' being treated by a methadone clinic ''where the prescription of methadone for pain is prohibited'' and had been diagnosed by Respondent as being substance abusers. *Id.* at 44–45. The ALJ also found that Respondent had violated the limitation imposed under Federal law and regulations which limit to 100, the number of patients who can be treated for substance abuse with Suboxone. ALJ at 46–47 (citing 21 U.S.C. 823(g)(2)(B)(iii) and 21 CFR 1301.28(b)(1)(iii)).

Next, the ALJ found that Respondent violated both Federal and State regulations because his medical charts ''fail[ed] to list the source and severity of pain when chronic pain [wa]s the diagnosis. ALJ at 47 (citing Ala. Admin. Code 540–X–4.08; 21 CFR 1306.04(a) and 1306.07(c)). The ALJ further found that Respondent's charts ''fail[ed] to record when medical examinations were conducted and the specific results of those examinations in support of diagnoses,'' and that ''[i]n some instances, patients actually reported that no examination was conducted.'' *Id.* The ALJ also found that the ''charts failed to show the use of any treatment options besides the prescribing of controlled substances,'' and that the ''lack of attempts of alternative treatment modalities prior to determining that the patient suffers from chronic pain violates 21 CFR 1306.07(c).'' *Id.*

The ALJ further found that Respondent had post-dated prescriptions for schedule II controlled substances in violation of Federal regulations. *Id.* at 47–48 (citing 21 CFR 1306.05(a) and 1306.12(b)). In addition, the ALJ found that Respondent had admitted to having issued a controlled substance prescription after he was served with the Immediate Suspension Order. *Id.* at 48. The ALJ then found that ''Respondent testified, and the record contains no expert evidence to the contrary, that his treatment of his patients met the standard of care.'' *Id.* However, based on Respondent's improper use of his data-waiver number on prescriptions, his unauthorized prescribing of methadone for maintenance and detoxification purposes, his incomplete records, his failure to recommend any treatment options for his chronic pain patients besides the prescribing of controlled substances, and his issuance of a controlled substance prescription after his registration was suspended, the ALJ concluded that these factors supported the revocation of his registration. *Id.*

With respect to factor five—such other conduct which may threaten public health or safety—the ALJ found that Respondent lacked candor. More

specifically, the ALJ noted that ''[p]ractically all of the patient charts in this record had the same diagnoses: Chronic pain and substance abuse. However, when most of the patients were asked about their treatment by the Respondent, they stated that they were being treated for substance abuse.'' *Id.* at 49. While the ALJ acknowledged ''that it may be difficult to accurately diagnose chronic pain or substance abuse,'' she found Respondent's testimony that the patients did not know that they were being treated for chronic pain to ''lack[] credibility.'' *Id.* The ALJ thus concluded that Respondent's ''lack of candor also threatens public health and safety.'' *Id.* at 49.

The ALJ then turned to Respondent's evidence as to his remedial measures. The ALJ noted that Respondent had stopped using his X number improperly (to prescribe drugs other than Suboxone and for purposes other than substance abuse treatment), that he had stopped prescribing methadone, and that at the hearing, he had ''apologized for the issuance of prescriptions for controlled substances without a proper DEA registration.'' *Id.* at 50. However, noting that upon being served with the Immediate Suspension Order, Respondent had stated that he did not intend to comply with it, as well as his testimony that while he currently lacks ''authority to handle controlled substances, he continues to 'help' with the Suboxone at [another] clinic,'' the ALJ found that Respondent's ''actions do not indicate remorse, but, rather, are more indicative of a failure to appreciate the seriousness of the allegations against him and the responsibility with which he was charged.'' *Id.* The ALJ further found that ''Respondent, through his actions, likely facilitated'' drug abuse. *Id.*

The ALJ thus concluded that Respondent had failed to rebut the Government's *prima facie* case. *Id.* at 51. She further recommended that Respondent's registration be revoked and that any pending applications be denied. *Id.*

Neither party filed exceptions to the ALJ's decision. Thereafter, the record was forwarded to this Office for Final Agency Action. Having considered the record as a whole, I adopt the ALJ's findings of fact and conclusions of law except as otherwise noted herein. I further adopt the ALJ's recommendation that Respondent's registration be revoked and that any pending application be denied. I make the following findings.

Findings

Respondent is a physician licensed by the Alabama State Board of Medical Examiners (hereinafter, State Board or Medical Board) and is board certified in family practice. As of the date of the hearing, Respondent's state license remains current and unrestricted. Tr. 259. The State Board, however, has an open investigation of Respondent. *Id.* at 257–58.

Respondent is also the holder of DEA Certificate of Registration BC1701184, which prior to the issuance of the Immediate Suspension Order, authorized him to dispense controlled substances as a practitioner in schedules II through V, with the registered location of Narrows Health & Wellness, 151 Narrows Parkway, Suite 110, Birmingham, Alabama.[1] ALJ at 4 (stipulated facts). Respondent's registration does not expire until August 31, 2012. *Id.*

Respondent is also authorized to dispense Suboxone and Subutex, under the Drug Addiction Treatment Act of 2000 (DATA), for the purpose of treating opiate addicted patients and is authorized to treat up to 100 patients; Respondent has been assigned identification number XC1701184 for this purpose. *Id.; see* 21 U.S.C. 823(g)(2). Suboxone and Subutex are schedule III controlled substances (and are the only schedule III through V drugs) which have been approved by the Food and Drug Administration for the treatment of opiate addiction by a DATA Waiver physician.

Respondent is not, however, authorized to dispense methadone, a schedule II narcotic, for the purpose of treating opiate addiction as he does not have the registration required by 21 U.S.C. 823(g)(1). GXs 1 & 2. Respondent can, however, lawfully dispense methadone for the purpose of treating pain.

The Investigation

Respondent first came to the attention of the authorities when several pharmacies complained to a State Board Investigator that he was prescribing large amounts of methadone using his X number. Tr. 35–36. The State Investigator passed this information on to a DEA Diversion Investigator (DI); on February 28, 2010, which was a Sunday morning, the two Investigators went to Respondent's Red Bay Clinic and arrived there at 6:30 a.m. *Id.* at 37. While the Investigators were in the parking lot taking photographs, they were approached by TS, who said ''[h]e was waiting to get his methadone from'' Respondent. *Id.* at 38. TS also stated that he paid cash for his visits, that he was seeing Respondent for an old football injury, that he did not provide any medical records to Respondent, and that he was not asked for identification when he first registered as a patient. *Id.* at 39–40.

Respondent did not arrive at the office until shortly before 11 a.m., by which time ''close to 50 people'' were waiting to see him. *Id.* The State Investigator then went inside to register in an attempt to see Respondent. *Id.* However, when the State Investigator was told that he would have to wait five to six hours to see Respondent, the Investigators decided to identify themselves and interview him. *Id.* at 42. Respondent initially told the Investigators that ''he was operating a detox clinic where he was using methadone to get his patients onto Suboxone.'' *Id.* at 43. Respondent also said that he accepted cash only, that he saw an average of 80 patients on Sundays at the Red Bay clinic, and that he also treated chronic pain patients on whom he performed ''range of motion tests.'' *Id.* at 43–44.

With respect to his chronic pain patients, Respondent told the State Investigator that he would look for surgical scars on the patient's body and that he sent some of his patients for X–Rays and MRIs. *Id.* at 218–19. Respondent admitted to the State Investigator that ''he did not'' follow the Board's guidelines for the use of controlled substances in treating pain. *Id.* at 220. In the interview, Respondent also stated that he would require his substance abuse patients to undergo drug screens ''if he felt that they needed one.'' *Id.* at 219.

Respondent also maintained that he knew the requirements for using his X number and that he was not prescribing any other drugs under this number. *Id.* at 44–45. The State Investigator then showed Respondent a methadone prescription he had written under his X number; Respondent said that the ''prescription was a mistake.'' *Id.* at 45. The DI then told Respondent that he had found ''close to 200 prescriptions * * * written under his X number for'' drugs other than Suboxone and Subutex, including Xanax (a schedule IV depressant) and Adderall (a schedule II stimulant). *Id.; see also id.* at 221 (testimony of State Investigator).

The DI then asked Respondent how many patients he was treating under his X number. *Id.* at 46. Respondent said that he had 60 patients at his Red Bay clinic and another 50 patients at his

[1] Respondent also was practicing at offices in Red Bay and Russellville, Alabama. ALJ at 4–5 (Stipulated Facts at para. 4); Tr. 35.

Birmingham office. *Id.* When told by the DI that this exceeded the 100 patient limit, Respondent claimed that ten of the patients were actually being treated with Suboxone for pain. *Id.* at 46.

During the visit, the DI encountered JKB in Respondent's waiting room and asked to speak with him. *Id.* at 51. The DI asked JKB what Respondent was treating him for; JKB stated that he was treating him for an addiction to opiates with methadone. *Id.* at 52. JKB also told the DI that he had previously gone to a narcotic treatment program which used methadone and that he was going to Respondent because it was cheaper. *Id.* at 53. JKB also stated that he was not seeing Respondent for chronic pain. *Id.*

Following this interview, the DI resumed his interview of Respondent. Respondent now maintained that he was prescribing methadone for pain. *Id.* When the DI told Respondent that he had just interviewed a patient who said he was being treated for opiate addiction with methadone, Respondent stated that the patient was mistaken. *Id.* at 54. When the DI reminded Respondent that he had earlier stated that he was using methadone to transfer patients onto Suboxone, he stated that he had previously misspoken and ''[t]hat he was only using methadone for pain'' and not to treat addiction. *Id.* at 55. When the DI asked Respondent whether it was possible to see eighty patients in a day and ''provide the kind of treatment that was necessary for'' them, Respondent stated that ''he was overwhelmed and . . . needed some guidance.'' *Id.* at 56–57.

Upon leaving the clinic, the Investigators observed ''approximately 50 patients inside of [the] office and probably another 50 to 60 . . . in the parking lot.'' *Id.* at 57. The Investigators then went to a local CVS pharmacy and interviewed its pharmacist, who stated that since the opening of Respondent's Red Bay clinic, he had ''seen a tremendous spiking in the amount of prescriptions for methadone.'' *Id.* at 58. The pharmacist further stated that Respondent was writing methadone prescriptions to treat addiction and that he would not fill these prescriptions. *Id.* at 59; *see also* GX 7.

On May 17, 2010, the Investigators (along with a Supervisory DI) went to Respondent's Russellville office and obtained various patients' files through either an administrative subpoena or a warrant. Tr. 48–50, 62–63. The Investigators again interviewed Respondent who stated that he was mainly seeing pain patients. *Id.* at 63. The DI then asked Respondent if he had made any changes to his practice; Respondent states that ''he had switched pretty much everybody from methadone to Suboxone and that out of the 85 percent [of his] patients that he was seeing for pain, 95 percent . . . were being treated with Suboxone.'' *Id.* at 64. Respondent also stated that he had stopped prescribing methadone for pain because he was having more success using Suboxone. *Id.* at 65.

During the interview, Respondent identified AK as a chronic pain patient who he was treating with Suboxone and who was waiting to see him. *Id.* at 65–66. The DI proceeded to interview AK, who had yet to see Respondent that day; AK stated that Respondent ''was treating her for an addiction to opiates,'' and that after the February visit by the Investigators, he had stopped writing methadone prescriptions. *Id.* at 66.

The DI also interviewed another patient, SH, who was in the parking lot. *Id.* at 73–74. SH stated that Respondent was treating him for opiate addiction and not for chronic pain. *Id.* at 74.

The DIs seized 114 patient files which were selected on the basis of pharmacy records showing that Respondent had prescribed either Suboxone or methadone to the patients. *Id.* at 171–72, 174. The files were taken to the DIs' office where they were reviewed. *Id.* at 68. Thereafter, the DIs focused their investigation on approximately 28 patients, whose files were introduced into evidence.[2] During the course of the investigation, the DIs interviewed most of these patients by telephone to determine why they were seeing Respondent. *Id.* at 172.

The Patient Files and Interviews

Respondent's Methadone Patients

TP

On June 1, 2010, the DI spoke with TP. TP told him that Respondent did not physically examine her, that she paid $100.00 for the visit and that he prescribed methadone to her. Tr. 103–105; GX 5X. TP went to Respondent because she had heard that he was using methadone to treat addiction. Tr. 105.

TP saw Respondent on three occasions (Feb. 7 and 21, and Mar. 7, 2010). GX 5X. TP completed an intake form on which she listed her medications as ''methadone 12 10s a day'' and wrote that her pharmacy was the ''methadone clinic.'' *Id.* at 2. At her first visit, Respondent checked ''YES'' for whether TP had pain and listed her legs and back as the location. *Id.* at 3. Respondent diagnosed TP as having chronic pain, substance abuse and anxiety. *Id.*

However, Respondent did not document the nature and intensity of the pain, current and past treatments for the pain, and its effect on TP's physical and psychological functioning. *Id.* at 3, 5. No vital signs were recorded at any of her visits. *Id.* In addition, the chart contains no medical history. *See generally* GX 5X.

Moreover, while TP indicated that she had previously gone to a methadone clinic, Respondent did not know the name of the clinic and did not even attempt to obtain her treatment records. *See generally* GX 5X; Tr. 727–28. In addition, the progress note for TP's third visit contains no information other than her name, date of birth and the date of the visit.

At each of TP's three visits, Respondent prescribed a daily dose of eleven tablets of methadone 10 mg, with the first two prescriptions being written under his X number for 154 tablets each. *See* GX 5X. While TP told the DI that after DEA's February 28, 2010 visit, Respondent told her that he was no longer prescribing methadone, Tr. 105; on March 7, Respondent again prescribed 88 tablets of methadone 10 mg to her. GX 5X, at 1. When Respondent offered TP alternative medications to methadone, she elected to return to a methadone treatment program. Tr. 501, 728.

When asked on cross-examination if the methadone clinic which TP had previously gone to was treating her for abusing narcotics, Respondent testified that while the only purpose of a methadone clinic is to treat ''substance abuse,'' she was ''going for pain.'' *Id.* at 728. While Respondent also diagnosed TP as having substance abuse, he did not document the substances that she was abusing. GX 5X.

DG

DG first saw Respondent on January 3, 2010. GX 5O. On the intake form, DG listed his medications as ''methadone.'' Respondent made a diagnosis of chronic pain even though he checked ''NO'' for whether DG had pain and the progress note for the visit does not document the nature and intensity of the pain, whether any treatments had been previously tried, and the pain's effect on his psychological and physical function. GX 5O, at 4. While Respondent noted that he performed a physical exam, he found each of the areas of the examination to be normal. *Id.* Respondent prescribed methadone to

[2] Twenty-six of the patient files were entered into evidence as Government Exhibit 5; the two remaining files were entered into evidence as Government Exhibits 22–23. Respondent also introduced copies of the same files. *See* RXS 2, 4–28. I have carefully reviewed both sets of files and conclude that there are no material differences between the two sets.

DG at this visit, as well as on January 12, 19, and February 1, 14, and 28, 2010. *Id.* at 5, 7, 9, 11.

On July 9, 2010, the lead DI interviewed DG. Tr. 106. DG stated that Respondent had told him on February 28, 2010, that he would no longer prescribe methadone, but that he would prescribe Suboxone to DG if he was having trouble getting off of the methadone. *Id.* at 107–08, 386.

Respondent testified that on January 19, 2010, he diagnosed DG as having a substance abuse problem, yet the medical chart does not document the basis for that diagnosis. *Id.* at 701–02. Respondent testified that his diagnosis was based on DG's demeanor and ''probably . . . also a drug screen.'' *Id.* However, there is no drug screen in the file. *See* GX 5O.

DG testified at the hearing. The ALJ found credible his testimony that he was also seeing the Respondent for pain in his shoulder and lower back. ALJ at 23. While DG believed this pain was a result of masonry work he had done since he was a teenager, as well as a snowboarding accident he had when he had lived in Utah, DG's chart does not reflect any of this information. Tr. 367, 374; GX 5O.

According to DG, Respondent examined him and would spend about 7 to 10 minutes with him during his visits. Tr. 370. DG also denied having told the DI that Respondent did not perform a physical exam on him and that he was seeing Respondent for substance abuse. Tr. 371.

Respondent used his X number to prescribe methadone for DG. GX 5O, at 5, 7, 9, 11. The methadone prescriptions were for lesser and lesser amounts. GX 5O, at 1. In March of 2010, Respondent proposed to offer DG an alternative medication treatment plan. *Id.* at 11; Tr. 386–87. The medical chart stops at that point. GX 5O. Respondent stated that he believed his treatment of DG was appropriate. Tr. 488.

MB

On July 20, 2010, the lead DI interviewed MB. Tr. 108; GX 5A. MB stated that she was seeing Respondent for an addiction to Lorcet and not for chronic pain, that she paid cash for her prescriptions, and that Respondent did not perform any physical examinations. Tr. 109–110. MB also commented that she thought there were too many people waiting inside and outside the office to see Respondent. *Id.* at 109.

On the progress note for MB's first visit, Respondent circled ''YES'' for whether she had pain and diagnosed her as having chronic pain due to headaches. GX 5A, at 7. At the hearing, Respondent testified that MB was being treated for both periodic headaches and substance abuse. Respondent did not, however, further document the nature and intensity of the pain, how it affected MB's ability to function, and any prior treatments for her pain. *See id.* Nor did he document the history of MB's substance abuse. Tr. 533–37. Respondent did not obtain information from MB's prior physicians. Tr. 533–34. While Respondent indicated that the physical examination was normal, he did not take MB's vital signs. Tr. 532–33; GX 5A, at 7.

Respondent described his treatment of MB as tapering her down on her methadone prescriptions, and the prescriptions show that Respondent was gradually reducing her daily dosage from 150 mg to 130 mg over the course of the slightly more than two months in which he treated her.[3] Tr. 463, 545, 550; GX 5A, at 5–6. At MB's last visit (Mar. 14), Respondent offered her the option of using different medication to control any potential withdrawal symptoms she may have from the lack of methadone. Tr. 464–65. However, MB chose to seek treatment elsewhere. Tr. 551.

Respondent issued MB two methadone prescriptions on his X prescription pad. Tr. 541–42; GX 5A, at 6. MB's file has no entry for her visits of February 28 and March 14, even though MB's drug log notes that a methadone prescription was issued on each date for 182 and 106 dosage units of methadone respectively. GX 5A, at 2–3.

JC1

Respondent saw JC1 three times in February and March of 2010. GX 5N. On his intake form, JC1 listed his medications as methadone and Xanax. GX 5N, at 2. On the progress note for JC1's first visit (Feb. 9), Respondent noted that he had been in an automobile accident and wrote ''back'' on the chart. *Id.* at 4. However, Respondent also noted that JC1 had ''NO'' pain and did not document the nature and intensity of the pain, details regarding the accident such as when it occurred, what treatments had been used, and the pain's effect on his physical and psychological functioning. *Id.* The progress note indicated that Respondent did a physical exam, during which he did not find any area to be abnormal. *Id.* Respondent did not document having taken JC1's vital signs. *Id.* At this visit, Respondent gave JC1 prescriptions for 210 tablets of methadone 10 mg, with a daily dose of 15 tablets, and 60 tablets of Valium, even though he noted that JC1 was not agitated or moody and did not have insomnia. *Id.* at 4–5. These prescriptions were written under his X number. *Id.* at 5.

At JC1's next visit (Feb. 23), Respondent again indicated that he had ''NO'' pain and did a physical exam at which he found all areas normal. *Id.* at 4. At this visit, Respondent noted diagnoses of both chronic pain and substance abuse. *Id.* Respondent issued JC1 a prescription for 210 tablets of methadone 10 mg, with a daily dose of 15 tablets ''for pain.'' *Id.* Respondent wrote the prescription under his X number. *Id.* at 5.

On March 9, Respondent wrote JC1 two more prescriptions, one for another 210 tablets of methadone with the same daily dose ''for pain'' as before, and one for twenty-eight tablets of Valium. *Id.* at 1, 7. Respondent wrote the prescriptions under his X number. *Id.* at 7. Respondent did not, however, create a progress note to document the issuance of the prescriptions. *See generally* GX 5N.

Respondent testified that JC1 had been in an automobile accident and had fractured his back, that he had developed a tolerance for pain medicine and was taking more and more, and thus went to a methadone clinic. Tr. 486. Respondent further testified that JC1 had come from either the Shoal's clinic or a narcotic treatment program in Hamilton because he ''wanted to take a cleaner medicine for his pain.'' *Id.* at 486, 699. Respondent denied that JC1 had gone to the narcotic treatment program ''to be treated for addiction'' and maintained that ''he was going there to be treated for pain from a fractured back.'' *Id.* at 699.

As for the basis of the substance abuse diagnosis which he made at JC1's second visit, Respondent testified that ''we probably got our February 9 drug screen back. And he probably had some [illicit] drug in there.'' *Id.* at 700. However, Respondent acknowledged that he was speculating about this because JC1's chart did not contain any drug test results. *Id.*

Respondent prescribed methadone at a lower dosage amount than the dosage JC1 reported he had been on. *Id.* at 486; GX 5N at 1, 5, 7. However, while Respondent maintained that JC1 ''wanted to take a cleaner medicine for his pain,'' Respondent did not taper the methadone prescriptions for JC1, but rather prescribed the same daily dose of 150 mg in each prescription between February 9, 2010, and March 9, 2010. Tr. 486; GX 5N, at 1, 5, 7. When in

[3] Respondent issued MB a total of six methadone prescriptions between January 5 and March 14, 2010. GX 5A, at 2. Some of the prescriptions indicated that they were ''for pain.'' *Id.* at 4, 6.

March, Respondent offered him alternative medications, JC1 elected to go to another treatment facility. Tr. 486. Respondent maintained that his care of JC1 was appropriate. *Id.* at 487.

JB

Respondent treated JB in February and March of 2010.[4] GX 5L. On the intake form, JB listed his medications as ''methadone,'' and on the progress note for his visit, Respondent wrote that JB had been a patient at the Shoals Treatment Center, that he had been on 230 mg. of methadone, but that he ''was kicked out.'' GX 5L, at 5. Respondent further wrote that JB ''desires to get off methadone.'' *Id.* In addition, Respondent noted that JB had foot pain, back pain and knee pain which had been caused by ''a four-wheeler accident.'' *Id.;* Tr. 696. Respondent performed a physical examination and took JB's blood pressure and heart rate. GX 5L, at 5. Respondent also noted that JB had withdrawal, was agitated/moody, had insomnia, and had a positive MDQ (Mood Disorder Questionnaire). *Id.* Respondent then issued JB a prescription for a fourteen-day supply of methadone 10 mg, at a daily dose of 18 tablets, *id.,* and noted that his plan included placing JB on his alternative medication (KCZZU) program. *Id.* Respondent issued JB a prescription for methadone, which was written under his X number, and wrote on it ''for pain.'' *Id.* at 6. Respondent also wrote JB a prescription for Ultram, a non-controlled drug, on the same form, which listed only his X number. *Id.*

On February 28, 2010, JB again saw Respondent. Respondent circled ''YES'' for whether JB had pain and insomnia, and made a further notation that his pain was worse, although the precise area is illegible. *Id.* at 5. Respondent again noted a diagnosis of chronic pain and issued JB another prescription for 252 methadone 10 mg, with a daily dose of 18 tablets ''for pain.'' *Id.* at 6. This prescription was also issued under his X number.

At JB's final visit (Mar. 14), Respondent noted that his ''pain persists'' and that he was ''anxious about stopping methadone.'' *Id.* at 3. Respondent issued him a prescription for 156 tablets of methadone 10 mg with a daily dose of 17 tablets ''for pain.'' *Id.* at 4. Respondent wrote the prescription on a form, which contained both his X number and regular DEA number. *Id.*

Respondent testified that JB had been asked to leave a drug treatment program before he saw the Respondent. Tr. 482. Respondent testified that he had done a drug screen on JB and that he did not ''see anything that bothered [him], such as cocaine * * * or marijuana at that time.'' *Id.* at 483. However, JB's file does not contain the results of a drug screen. GX 5L.

According to Respondent, JB had been in a four-wheeler accident, took narcotics, and went to the drug treatment program because his other physician would not write anymore prescriptions for narcotics. Tr. 696. Respondent did not, however obtain JB's records from the drug treatment program and Respondent maintained that the fact that JB was being treated at a methadone clinic did not tell him that JB was being treated for opiate addiction. *Id.* at 695–96. Respondent stated that he prescribed methadone in a tapered amount to prevent JB from going into withdrawal. *Id.* at 483; GX 5L, at 1.

Respondent also testified that he had provided JB with the option of other treatment medications, but that he elected to go to another methadone clinic. Tr. 483. Respondent annotated in the medical chart that he was treating JB for back and knee pain. GX 5L, at 5–6. Respondent did not document the severity of the pain. GX 5L. Respondent stated that his treatment of JB was appropriate. Tr. 483–84.

NB

Respondent saw NB three times in February and March of 2010. GX 5M. At her first visit (Feb. 7), Respondent diagnosed her as having chronic pain even though he indicated that she had ''NO'' pain. GX 5M, at 3. Respondent did not document any further information regarding NB's condition (such as the nature and intensity of the pain, its history, whether any treatments had been previously tried, and the pain's effect on her psychological and physical functioning) at any of her three visits. *Id.* at 3, 5.

The progress note for NB's first visit indicates that Respondent performed a physical exam. *Id.* at 3. However, Respondent noted that all areas were normal. *Id.* Respondent did not document having taken NB's vital signs. *Id.* At this visit, Respondent issued NB prescriptions under his X number, for 210 tablets of methadone 10 mg (with a daily dose of 15 tablets) and 30 Xanax. *Id.* at 4. Respondent did not diagnose NB as having anxiety; indeed, he noted that she was not agitated/moody and did not have insomnia. *Id.* at 3.

On Feb. 21, Respondent issued NB additional prescriptions for methadone and Xanax under his X number. *Id.* at 4. The progress note for this visit, however, contains no information regarding her medical condition. *Id.* at 3. On the progress note for NB's final visit (Mar. 7), Respondent circled ''CHRONIC PAIN'' but made no other findings. *Id.* at 5. At this visit, Respondent issued her prescriptions for 112 tablets of methadone 10 mg, with a daily dose of 14 tablets ''For Pain,'' and for 20 tablets of Klonopin ''for anxiety.'' *Id.* at 6. Respondent wrote the prescriptions on a form which listed both his X number and his regular registration number. *Id.*

Respondent testified that NB told her at the initial visit that she had been on 180 mg of methadone and that ''she was taking it for pain.'' Tr. 484. He then testified that ''she also had some anxiety'' and that she was a ''troubling patient'' because she was ''on a combination of methadone and Xanax'' which caused him great concern, especially if ''those two drugs get mixed with alcohol.'' *Id.* at 485. None of this was documented.

Respondent also testified that he gave her ''150 methadone,'' which was ''much less methadone than she was on,'' and that he ''gave her 28 tablets of the Xanax in fear of seizure potential if we went below that.'' *Id.* At her last visit, Respondent offered NB the option of alternative medications, after which she did not return to his clinic. *Id.* 485; GX 5M. Respondent believed his care of NB was appropriate. Tr. 485–86.

KI

Respondent saw KI four times in February and March of 2010. GX 5T. On the intake form, KI noted that her medications included ''methadone, Xanex[sic], [and] Ambien.'' *Id.* at 2.

According to Respondent, KI was being treated at Shoals, a narcotic treatment facility, and she wanted out of the clinic. Tr. 494. Respondent testified that KI had back pain; however, Respondent indicated that she had ''NO'' pain on the progress note for her first visit. Tr. 494, GX 5T, at 3. Although Respondent wrote ''Back'' as the location, once again, he did not document the nature and intensity of the pain, the history of the pain, what treatments had been used, and the pain's effect on KI's physical and psychological functioning. GX 5T, at 3; Tr. 494, 718.

Respondent performed a physical examination but did not note any abnormalities; he also did not document

[4] It is unclear whether JB is the same person as JKB, who was interviewed in the waiting room on February 28, 2010, and who told Investigators that he had previously gone to a methadone clinic and that Respondent was treating him for opiate addiction, as the Government did not establish that this chart (GX 5L) was JKB's.

having taken KI's vital signs. GX 5T, at 3. Respondent noted the diagnoses of both chronic pain and substance abuse and prescribed a lesser dose of methadone (130 mg per day) than what KI reported she had been receiving at Shoals (150 mg). Tr. 494; GX 5T, at 3–4. However, Respondent did not taper KI's methadone prescriptions; rather, he prescribed 130 mg per day of methadone to her three times between February 7, 2010, and March 7, 2010, with the first two prescriptions being written under his X number. GX 5T, at 1, 4, 6.

Respondent did not obtain treatment records from the narcotic treatment facility and did not know what substance KI was abusing; he also did not obtain any records related to her back pain. Tr. 715–16. Respondent testified that KI began taking narcotics to treat her pain, became addicted to those narcotics, but then denied that she had told him that she then entered the methadone clinic to treat her addiction. *Id.* at 716–17. Respondent testified that he offered alternative medications to KI, that on March 21, 2010, he refused to prescribe methadone to her, and that she then ''went to another facility.'' *Id.* at 494–95. Respondent maintained that his care of KI was appropriate. *Id.* at 495.

Respondent's Suboxone Patients

SS

On June 1, 2010, the DI spoke with SS by phone. Tr. 96. SS said that he was being treated for opiate addiction, that he received a Suboxone prescription from Respondent, and that he was not being treated for chronic pain. He also stated that he paid $100.00 cash directly to Respondent for his prescription and that Respondent did not conduct any examination on him. Tr. 95–98; GX 5H.

SS saw Respondent only on May 2, 2010. GX 5H, at 2–3. On the intake form, SS listed methadone as his medication and Respondent noted on the progress note that he was on 120 mg. *Id.* at 3. Respondent diagnosed SS as having both chronic pain and methadone use; while Respondent checked ''NO'' for SS's pain, he indicated that SS had disc surgery at L5S1. *Id.* at 3; Tr. 475. While Respondent recalled, and the chart reflects, that SS had back surgery, SS's chart does not contain any copies of records related to his back surgery and does not document the date of the surgery. Tr. 475, 673; GX 5H. SS's chart does not document the nature and intensity of the pain, current and past treatments for it other than the surgery, and the pain's effect on his physical and psychological functioning. GX 5H, at 3. No vital signs were recorded at SS's visit. *Id.*

Respondent testified that SS was on methadone, which he was getting ''off the street,'' but that fact is not annotated in his chart. Tr. 672. Respondent, however, refused to prescribe methadone to SS. Instead, he prescribed Suboxone and offered SS the choice of an alternative medical treatment program for getting off of methadone. *Id.* at 475–76, 674. Respondent believed that he gave SS appropriate care. *Id.* at 476.

AG

On May 17, 2010, the DI interviewed AG. *Id.* at 80. AG stated that she was seeing Respondent for treatment of her addiction to Lortab, a schedule III narcotic containing hydrocodone. *Id.* at 80–81. AG further explained that she was not being treated for chronic pain, although such treatment was indicated in her chart. AG stated she did not know why her chart listed this condition. *Id.* at 81; *see also* GX 5P.

According to her chart, Respondent diagnosed AG as having chronic pain and substance abuse as a secondary condition. GX 5P, at 3; Tr. 488–89. However, the chart does not specify the basis for this diagnosis and Respondent checked ''NO'' for whether AG had pain. Tr. 704; GX 5P, at 3. In addition, Respondent did not record any vital signs at this or any subsequent visit.

Respondent prescribed Suboxone to AG at both the initial and several subsequent visits. Tr. 488; GX 5P, at 1, 4, 6, 8, 9. Moreover, at subsequent visits, Respondent continued to diagnose AG as having both chronic pain and substances abuse while checking ''NO'' for whether she had pain. *See id.* In other instances, the progress notes indicate that AG visited on a certain date but are otherwise blank even though Respondent issued AG a prescription. GX 5P, at 5. At AG's final visit, Respondent circled ''YES'' for whether she had pain but provided no further documentation as to the location of the pain, the nature and intensity of the pain, current and past treatment for pain, and its effect on her physical and psychological functioning. *Id.* at 7. In addition, the chart contains no medical history. *See generally* GX 5P. Respondent nonetheless maintained that he met the standard of care with respect to AG. Tr. 489.

LM

On June 1, 2010, DI Michael Jones interviewed LM by telephone. *Id.* at 82. LM stated that the Respondent was treating her for an addiction to pain killers. *Id.* at 83. Respondent had been treating LM since December 27, 2009, at the Red Bay clinic. LM confirmed that she was not being treated for chronic pain. Tr. 82–83.

LM completed a form in which she listed her medications as Adderall and Oxycontin, the latter being a schedule II narcotic. Tr. 193; GX 5V, at 2. At LM's first visit, Respondent diagnosed LM as having chronic pain, substance abuse, and bipolar disorder. GX 5, at 3. While Respondent checked ''YES'' for whether LM had pain and listed her ''back'' as the location, the chart does not document the nature and intensity of the pain, current and past treatments for pain, and its effect on her physical and psychological functioning. *Id.* In addition, the chart contains no medical history. *See generally id.* Respondent prescribed Suboxone and Adderall on an X prescription pad. GX 5V, at 4, 6. Subsequently, he prescribed both controlled substances using his regular DEA registration number. GX 5V, at 6–7.

At subsequent visits, Respondent continued to list chronic pain as a diagnosis while checking ''NO'' for whether LM had pain.[5] *Id.* at 3. Respondent testified that he was treating LM for back pain and for bipolar disorder. He further stated that LM was on Oxycontin and wanted to get ''onto a better pain medicine.'' Tr. 498. However, when asked on cross-examination as to whether his diagnosis of substance abuse was ''based on her abuse of Oxycontin,'' Respondent stated: ''I think it had to do with—she had multiple things. She had stimulants * * * such as Adderall,'' and ''I think she had taken periodically Xanax.'' *Id.* at 723.

LM's progress notes do not, however, indicate what substance(s) she was abusing. GX 5V, at 3 & 5. Moreover, notwithstanding his testimony that her substance abuse was based in part on her use of Adderall, Respondent prescribed this drug to LM at four of her subsequent visits. *Id.* at 4, 6, 7. Respondent believed his treatment of LM was within the standard of care. Tr. 498–99.

ET

On June 1, 2010, the DI interviewed ET by telephone. ET explained that the Respondent was treating him for an addiction to pain killers. Tr. 83–84. Respondent prescribed Suboxone to ET on an X pad on four occasions between December 2009 and March 2010; in

[5] At LM's second visit, Respondent listed substance abuse as a diagnosis; however, at two subsequent visits, he no longer listed substance abuse as a diagnosis. *See* GX 5V.

April, he prescribed Suboxone to ET on a prescription pad which listed both his X number and his practitioner's registration number. GX 5Z, at 4, 6, 8. ET told the DI that he was not being treated for chronic pain. Tr. 83–84.

The first two progress notes (one of which is undated but which is above the note for January 5, 2010 [6]) indicate a diagnosis of chronic pain but not substance abuse, the latter not being listed as a diagnosis until ET's third visit (Feb. 2, 2010). GX 5Z, at 3, 7. Here again, Respondent noted on the chart that ET had ''NO'' pain and the chart does not indicate the location of the pain, the nature and intensity of the pain, current and past treatments for the pain, and its effect on his physical and psychological functioning. *Id.* at 3, 5, 7. No vital signs were recorded at any of ET's visits. *Id.* In addition, the chart contains no medical history. *See generally* GX 5Z. Respondent maintained that his care of ET was appropriate. Tr. 503.

CT

On June 2, 2010, a DI spoke with CT. CT stated that Respondent was treating her for opiate addiction with Suboxone. Tr. 87–88. On the intake form, CT listed her medications as ''Suboxone, methadone, and Zanex [sic].'' GX 5Y, at 2.

At CT's first visit, Respondent diagnosed her as having both substance abuse and chronic pain. GX 5Y, at 3. However, Respondent did not indicate in the chart what substance she was abusing. *Id.* Moreover, Respondent indicated that she had ''NO'' pain. *Id.* Respondent did not indicate a location of CT's pain until the third visit (approximately two months later) when he noted its location as her ''back,'' but once again checked that she had ''NO'' pain. *Id.* at 5. While Respondent listed a diagnosis of chronic pain at each of CT's four visits, he never checked ''YES'' for pain on any of the progress notes. *Id.* at 3, 5. Respondent did not document the nature and intensity of the pain, current and past treatments for the pain, and its effect on CT's physical and psychological functioning. *Id.* Nor did he record vital signs at any of CT's visits. *Id.*

In his testimony, Respondent admitted that he did not know what substance(s) CT was abusing, but added that ''usually they're on multiple medicines to get whatever desired effect they want.'' Tr. 729–30. Respondent did not obtain any prior treatment records for CT, whether for pain or substance abuse. *Id.* at 731.

Respondent wrote CT prescriptions for Suboxone on a pad which contained only his X number, as well as on a pad which contained both his X number and his regular DEA registration number. GX 5Y, at 4, 6. Respondent believed his treatment of CT was within the standard of care. Tr. 502.

JH

On June 2, 2010, the lead DI spoke with JH. JH stated that Respondent was treating him for ''a bad addiction to Oxycontin'' with Suboxone and that he was not being treated for chronic pain. Tr. 89–90; GX 5R. JH listed his medications as ''OXY 80 mg x4.'' GX 5R, at 9. According to Respondent, JH was taking ''four [Oxycontin] a day for his pain,'' which he was getting off the street because ''his doctors fired him.'' Tr. 710.

At JH's first visit, Respondent diagnosed him as having substance abuse, attention deficit disorder and chronic pain. GX 5R, at 10. While in his testimony, Respondent maintained that JH had told him that he needed OxyContin ''to get by with his pain,'' on JH's chart, Respondent indicated that JH had ''NO'' pain and did not document a cause of the pain. *Id.* Moreover, while JH saw Respondent multiple times thereafter and diagnosed him as having chronic pain at each visit, Respondent never checked ''YES'' in the pain entry of the progress notes and never provided a description and location of the pain. *See generally* GX 5R. Moreover, Respondent never recorded vital signs for any of JH's visits. *See generally id.* Nor does JH's chart include a medical history. *See generally id.*

Respondent obtained a printout of JH's prescriptions from the State's prescription monitoring program. *Id.* at 2–8. While the report showed that JH had also obtained Suboxone from another physician (Dr. H.), Respondent neither obtained JH's records from Dr. H. nor conferred with him. Tr. 711–12; GX 5. Respondent wrote JH prescriptions for both Suboxone and Adderall under his X number. GX 5R, at 11, 15. However, Respondent required JH to undergo a drug test; while this test showed that JH was taking Suboxone (buprenorphine) and amphetamine (Adderall), he also tested positive for marijuana use. GX 5R, at 12. Respondent believed his care of JH was appropriate. Tr. 492.

KP

On June 2, 2010, the lead DI spoke with KP. KP stated that Respondent was prescribing Suboxone to treat her opiate addiction and that she was not being treated for chronic pain. Tr. 92–94. While Respondent testified that KP was on a narcotic which she wanted off of, KP did not list any medications she was on. GX 5W, at 2. Moreover, Respondent did not document the name of the narcotic in KP's record. Tr. 499.

Respondent testified that KP had ''a complaint of pain.'' *Id.* At KP's first two visits (Dec. 6, 2009 and January 3, 2010), Respondent diagnosed her as having only chronic pain. GX 5W, at 3. However, for both visits, Respondent checked ''NO'' for whether KP had pain and did not list a cause or location of any such pain. *Id.*

Respondent did not make a diagnosis of substance abuse until her third visit (Jan. 19, 2010); however, none of the progress notes for KP's subsequent visits list a diagnosis of substance abuse.[7] *See id.* at 5, 7, 9, 11. Moreover, while Respondent continued to diagnose KP as having chronic pain, he did not check ''YES'' for whether she was having pain on any of the progress notes. *See id.* Nor did he document the cause, location or severity of her pain, or record her vital signs, at any of her visits. *See id.*

KP stated that she had to pay cash for her prescriptions as Respondent would not file a claim with Medicare for her. Tr. 94. She also stated that the Respondent did not perform any medical examinations on her, although Respondent indicated on the progress notes that he had done so and noted that the various parts of the examinations were normal (by either checking or lining through them). Tr. 95, *see also* GX 5W, at 3, 5, 9.

Respondent prescribed Suboxone and Xanax for KP on an X prescription pad. *Id.* at 499; *see also* GX 5W, at 4, 6. Respondent believed his treatment of KP was within the standard of care. Tr. 500.

TB

On June 10, 2010, the lead DI spoke with TB. TB stated that Respondent was prescribing Suboxone to him for both pain and addiction. Tr. 98–99; GX 5B. TB wrote on the intake sheet that he had used Suboxone, but Respondent did not know who prescribed it, and he commented that he could not tell from TB's chart if the Suboxone had been prescribed for substance abuse. GX 5B, at 1; Tr. 580–81.

At the first visit (Dec. 20, 2009), Respondent diagnosed TB as having chronic pain and substance abuse. Tr.

[6] For this reason, I conclude that the undated note was for ET visit of December 8, 2009, at which Respondent issued him a prescription for Suboxone. *See* GX 5Z, at 1 & 4.

[7] Respondent also diagnosed KP as having anxiety, for which he prescribed Xanax. GX 5W, at 5.

466. Respondent checked ''YES'' for whether TB had pain and indicated the location as the lumbar area. GX 5B, at 6. While Respondent testified that ''[w]e got him to tell us about his back problems,'' if he had undergone any surgeries and how ''it affect[ed] his everyday activity,'' Respondent did not document the nature and intensity of the pain, whether any treatments had been previously tried, and the pain's effect on his psychological and physical function. *Id.*; Tr. 578–79. Moreover, Respondent did not know if TB's back pain was caused by an injury or a degenerative condition. Tr. 578–79.

The chart indicates that Respondent performed an examination at which all areas including TB's back were found to be normal. GX 5B, at 6. However, no vital signs were recorded. *Id.* at 6–7. Respondent prescribed Suboxone to TB, as well as Ambien. *Id.* While Respondent testified that he prescribed the Suboxone for TB's back pain, he issued the prescription under his X number; he also issued the Ambien prescription on the same form. *Id.* at 7.

Respondent also saw TB on January 19, February 16,[8] and May 2, 2010. *Id.* at 4–7. At both the January and February visits, Respondent prescribed both Suboxone and Ambien to TB using his X number. *Id.* at 5, 7; Tr. 466–67, 587–88. Respondent did not obtain TB's records from other doctors even though TB listed Suboxone as one of his medications. Tr. 578–580; GX 5B. When asked if he knew the name of the doctor who had previously prescribed Suboxone to TB, Respondent testified ''We might have found it out—I just didn't document it * * *. It could be a local doctor there.'' Tr. 581. When asked why TB had previously gotten Suboxone, Respondent could not definitively answer if it had been for pain or substance abuse. *Id.* at 582. With respect to the Ambien prescriptions, Respondent admitted that he did not document an insomnia diagnosis. *Id.* at 583.

SW

SW's chart indicates that he was being treated for chronic pain and substance abuse. While the chart for SW's first visit indicates that he was on Oxy 160 mg, Respondent checked ''NO'' for whether SW had pain and did not document the cause or severity of SW's pain. GX 5J at 3, 5. Respondent did not identify a potential source of SW's pain until his third and final visit, when he noted that SW had a herniated disc in his back and had undergone surgery. *Id.* at 3.

SW testified at the hearing and the ALJ found credible his testimony that he had a herniated disc in his back, that he had been taking Oxycontin for the pain, and that he had begun treatment with the Respondent in order to get a different pain medication. Tr. 346. The ALJ also found credible SW's testimony that he told a DI that Respondent was treating him for chronic pain and that the Respondent had performed a physical examination on him.[9] However, the ALJ also found credible SW's subsequent testimony that he had told the DI that he was being treated for substance abuse because ''it was better being on Suboxone than it was Oxycontin.'' Tr. 363.

Respondent did not know who had prescribed Oxycontin to SW, and SW's chart does not contain any prior medical records. Tr. 684–85; GX 5J. SW testified that he was addicted to his pain medications. Tr. 355. Respondent spent 15 to 20 minutes with SW and prescribed Suboxone to him. *Id.* at 351–52; GX 5J. SW testified that he had an MRI in 2005 or 2006, and a bone scan in 2001 or 2002, but these test results were not part of his patient chart in evidence. Tr. 346, 349, 353, 357; GX 5J.

SW saw Respondent three times. *See* GX 5J.[10] At the time of the hearing, SW was still taking Suboxone, but he was not getting it from Respondent. Tr. at 364–65. Respondent refused to file an insurance claim for SW., and required that he pay $100 cash for the visits. *Id.* at 102–103.

CL

CL first saw Respondent on December 20, 2009. *See* GX 22, at 6. Respondent made a diagnosis of both chronic pain and bipolar disorder; however, Respondent did not document the nature and intensity of the pain (he did not check either ''YES'' or ''NO'' for whether CL had pain), the history of the pain, whether any treatments had been previously tried, and the pain's effect on her psychological and physical function. *Id.* While Respondent noted that he had performed a physical exam and found all areas normal, he did not record any vital signs. *Id.* Respondent did not make a substance abuse diagnosis at this visit and yet prescribed Suboxone to CL under his X number. *Id.* at 7.

Respondent saw CL again on January 17, 2010. *Id.* at 6. At this visit, Respondent again diagnosed CL as having pain even though he noted that she had ''NO'' pain and made none of the findings as explained above. *Id.* He also diagnosed her as having substance abuse and required that CL undergo a drug screen, the results of which are not in her chart. Tr. 127–28, 153–54; GX 22. Respondent did not, however, document CL's history of substance abuse. GX 22, at 6. Respondent again provided CL with a prescription for Suboxone. *Id.* at 7.

Respondent provided CL with prescriptions for Suboxone on February 14, March 14, April 10, and May 9, 2010. *Id.* at 2–3, 5. However, the progress notes for both February 14 and March 14 contain no information besides CL's name, date of birth and the date of the visit. *Id.* at 4. The progress note for April 10 indicates that CL had chronic pain even though Respondent checked ''NO'' for her pain and no longer listed substance abuse as a diagnosis. *Id.* at 1. Finally, the progress note for CL's last visit (May 9) again lists chronic pain as one of three diagnoses even though Respondent checked that she had ''NO'' pain. *Id.* While the notes for both the April 10 and May 9 visits indicate that CL's physical exam was normal, Respondent did not document having taken any vital signs as either visit. *Id.*

CP

The earliest progress note for CP is dated December 20, 2009, which also corresponds with the earliest date listed on the record of CP's Suboxone prescriptions. GX 23, at 5, 10. The progress note indicates a diagnosis of chronic pain, even though Respondent checked that CP had ''NO'' pain and contains no other documentation (such as the nature and intensity of the pain, its history, and its effect on CP's functioning) to support this diagnosis. *Id.* at 5. Respondent also diagnosed CP as having substance abuse (with no supporting findings) and anxiety. *Id.* While Respondent performed a physical exam and found all areas normal, he did not document having taken CP's vital

[8] In the progress note for this visit, Respondent indicated that TB had ''NO'' pain while continuing to indicate that he had chronic pain. GX 5B, at 4. In his testimony, Respondent explained he ''marked off that [TB's] pain was controlled under the no part.'' Tr. 588. The ALJ did not, however, credit this testimony. *See* ALJ at 21–22. Nor do I.

[9] The ALJ noted that the testimony of the lead DI and SW conflicted on this point. ALJ at 22 n.3. The DI testified that SW told him that Respondent was not treating him for chronic pain and had not performed a physical examination on him; SW testified to the contrary. *Compare* Tr. 102–03, *with id.* at 348–49. The ALJ found, however, that the DI had difficulty recalling the conversation that he had with SW and his memory had to be refreshed by the use of his notes, *id.* at 101–102, but that SW's memory required no similar refreshment. *Id.* at 345–65. I therefore adopt the ALJ credibility finding that SW's testimony is a more reliable account of the conversation that took place between SW and the DI.

[10] SW testified that he saw Respondent four or five times. Tr. 364. However, SW's patient file documents only three visits.

signs. *Id.* Respondent prescribed Suboxone and Xanax at this visit using his X number.

At the next visit, Respondent again noted that CP had chronic pain while indicating that he had ''NO'' pain. *Id.* Respondent, however, made an entry in the blank for ''EXT'' and for the ''Location,'' both of which are illegible. *Id.* Respondent did not, however, note a diagnosis of substance abuse at this or any subsequent visit. *See generally id.* at 1,3,5.

At CP's next visit (Feb. 16), Respondent again diagnosed him as having chronic pain while noting that he had ''NO'' pain. *Id.* at 3. Subsequently, at CP's April 10 visit, Respondent again checked that CP had ''NO'' pain while writing ''knee pain'' in the ''Review of Systems'' section; he also made a note next to the ''EXT'' section of the Examination which is illegible but was not asked about this during his testimony. *Id.* Finally, at CP's final visit, Respondent again diagnosed him as having chronic pain but noted that he had ''NO'' pain and did not otherwise document any other findings regarding CP's pain. *Id.* at 1. Moreover, the Government did not offer any testimony as to whether it had interviewed CP.

Respondent issued CP prescriptions for Suboxone on Dec. 20, 2009, Jan. 17, Feb. 16, Mar. 16, April 10, and May 9, 2010; he also wrote CP prescriptions for Xanax on each of these dates except for April 10. GX 23. Respondent wrote both the Suboxone and Xanax prescriptions on Dec. 20, 2009, as well as the Jan. 17, Feb. 16, and March 16, under his X number. *Id.* He also wrote the April 10 Suboxone prescription under his X number even though he did not list a diagnosis of substance abuse on any of CP's visits after the first visit. *Id;* Tr. 130–31.

CML

On June 23, 2010, another DI interviewed CML and asked whether she was ''being treated for pain or addiction.'' Tr. 266–67. CML stated that she was being treated for addiction to controlled substances and that the Respondent was prescribing Suboxone to her. *Id.* at 267–68. She paid $100.00 cash for her visits. *Id.* at 268.

On the progress note for CML's first visit (Dec. 8, 2009), Respondent checked that she had both pain and chronic pain, as well as insomnia. GX 5F, at 7. While Respondent noted that her physical exam was normal in all areas, he did not record any vital signs and did not document the nature and intensity of the pain, the history of the pain, whether any treatments had been previously tried, and the pain's effect on her psychological and physical function at any of her subsequent visits. *See* GX 5F. Respondent did not document that CML had back pain until her sixth and final visit (April 27, 2010), while on the same note checking that she had ''NO'' pain. *Id.* at 3.

Indeed, several of the progress notes for CML's visits contain no medical information whatsoever. With respect to this, Respondent testified, ''In fact, there's some entries I didn't even put in on February and March of 2010 and I don't know why that's the case.'' Tr. 472.

At CML's second visit, Respondent noted a diagnosis of substance abuse. GX 5F, at 7. However, Respondent did not note this diagnosis at any of CML's subsequent visits. *See* GX 5F. Moreover, the chart contains no information about what substances CML was abusing and her history of substance abuse. GX 5F, at 7; Tr. 666.

Respondent admitted that the chart fails to adequately document CML's pain. Tr. 472. Respondent also testified that he was tapering CML's dosages of Suboxone to find the appropriate levels to treat her chronic pain. *Id.* at 473. Respondent maintained that his care of CML was within the standard of care. *Id.* Respondent prescribed Suboxone (and Ambien at the first visit) to CML under his X number at several of the visits even though he did not document that he was treating her for substance abuse at those visits. *See* GX 5F.

SJW

On December 29, 2009, SJW made her initial visit to Respondent.[11] GX 5I, at 7. At the visit, Respondent diagnosed SJW as having both chronic pain and substance abuse, although he noted that she had ''NO'' pain and did not document the nature and intensity of the pain, the history of the pain, whether any treatments had been previously tried, and the pain's effect on her psychological and physical function at this or any of her subsequent visits. *Id.* While Respondent indicated that all areas of her physical examination were normal, he did not record any vital signs at this visit. *Id.* Nor did Respondent make any notes regarding SJW's history of substance abuse. There is, however, no evidence that Respondent prescribed to SJW at this visit.

Respondent did, however, prescribe Suboxone (and Xanax) to SJW at her second visit, which occurred one week later. *Id.* at 7–8. On the progress note for this visit, Respondent listed the diagnoses as chronic pain (while indicating that she had ''NO'' pain and failing to document any other information regarding her condition) and substance abuse, again without any documentation. *Id.* at 7. Moreover, he again documented that SJW's physical exam was normal but did not record any vital signs. *Id.* Nor did Respondent document that SJW had anxiety, the condition for which Xanax is typically prescribed, and, in fact, Respondent indicated ''NO'' for whether she was agitated/moody. *Id.*

While SJW's chart shows that she received prescriptions for Suboxone (and Xanax) in February and March, the progress notes for this period contain no information regarding her medical condition(s). *Id.* at 2,—5–6. Regarding these incidents, Respondent stated: ''I don't have an explanation for it unless I had to zip over and take care of another patient and I just took care of her and then took off. I don't know the situation.'' Tr. 681.

On May 9, 2010, SJW made her final visit to Respondent. GX 5I, at 3. At this visit, Respondent again diagnosed her as having chronic pain while indicating that she had ''NO'' pain and that her physical examination was normal in all areas. *Id.* at 3. Respondent also diagnosed her as having anxiety, even though he indicated ''NO'' for whether she was agitated or moody. *Id.* Respondent issued her prescriptions for both Suboxone and Xanax. *Id.* at 4.

On June 23, 2010, a DI phoned SJW and interviewed her. SJW told the DI that Respondent was treating her for her addiction to controlled substances and that she paid $100 cash for each visit. Tr. 268–69. On two occasions (Jan. 5 and Feb. 2), Respondent prescribed both Suboxone and Xanax to SJW under his X number. Tr. 269; GX 5I, at 6, 8. Respondent testified that he was treating SJW for pain and anxiety. Tr. 477, 679.

As for how he made his diagnosis of substance abuse, Respondent testified that ''[i]t could be in her history with me; it could be a drug screen.'' *Id.* at 679. There is, however, no evidence in SJW's chart establishing that Respondent took a history or that he required her to undergo a drug screen. *See generally* GX 5I. Moreover, when asked ''do we see an indication that [SJW] complained of pain?,'' Respondent answered: ''No. I did not fill that out.'' TR. at 679–80. As for Respondent's failure to note why he prescribed Xanax, Respondent testified: ''No, I did not put an anxiety there. And there was a good chance that she was on Xanax already. Did not give it to her in the December because she probably

[11] SJW's file includes an intake form in which she listed her medications as ''Suboxin.'' GX 5I, at 1.

already had an active prescription for it. And we probably got that from the drug monitoring system.'' *Id.* at 680. Respondent believed his treatment of SJW was appropriate, but that his documentation was ''terrible.'' Tr. 478.

LMJ

On her intake form, LMJ listed her medications as ''Loricets'' [sic]. GX 5E. At her first visit (Feb. 16, 2010), Respondent made diagnoses of both chronic pain and substance abuse. *Id.* at 4. However, Respondent noted that LMJ had ''NO'' pain, that her physical examination was normal and did not document the nature and intensity of the pain, the history of the pain, whether any treatments had been previously tried, and the pain's effect on her psychological and physical function at this visit or her next two visits. *Id.* at 2 & 4. Respondent did not note a location of any pain LMJ had until her final visit; even then, however, he did not document any information other than that the pain was in her ''back & arms.'' *Id.* at 2. Respondent did not document having taken LMJ's vital signs at any of her visits. *Id.* at 2, 4. Moreover, while at LMJ's first three visits, Respondent listed a diagnosis of substance abuse, the chart contains no information as to her history of substance abuse. *Id.* at 2, 4. At each of LMJ's visits, Respondent prescribed Suboxone to her. *Id.* at 3, 5.

On June 24, 2010, a DI interviewed LMJ by phone. Tr. 270. The DI asked LMJ whether she was seeing Respondent for pain or for addiction to controlled substances; LMJ said that she was seeing Respondent for addiction for which he was prescribing Suboxone. *Id.* LMJ also stated that she paid $100.00 cash for each visit. *Id.*

The ALJ found that Respondent credibly testified that he did not ''have a good grasp on her history and physical as to, is this chronic pain or substance abuse, so we put the differential as both of these right now.'' *Id.* at 470. She also found credible Respondent's testimony that LMJ was a patient ''who wanted to get off Lorcet because she was building such a tolerance having to take more and more of this for her pain, but I could not totally rule out that she had a substance abuse problem.'' *Id.* at 471. While Respondent testified that he could sometimes rule out a substance abuse diagnosis ''later on as [I] get a grasp on these patients, and periodic random drug screens help me with this also,'' there is no evidence that Respondent required LMJ to undergo a drug test. *Id.* Respondent thought his treatment of LMJ was within the standard of care. *Id.*

MR

MR first saw Respondent on December 15, 2009. GX 5G, at 7. Respondent diagnosed MR as having chronic pain even though he noted that MR had ''NO'' pain. *Id.* Respondent documented the pain's location as MR's ''Teeth'' and prescribed Suboxone to him. *Id.* at 7–8. Respondent testified that MR's pain was in his mouth and jaw, but the chart does not contain any other information regarding this condition. Tr. 474, 668; GX 5G. Moreover, Respondent continued to list a diagnosis of chronic pain at MR's visits of Jan. 17, Feb. 14, and Mar. 30, even though on the respective progress notes, he checked ''NO'' for whether MR had pain, did not list a location of the pain, noted that the physical exam was normal in all areas, and did not document having taken any vital signs *Id.* at 5, 7. Nor is there any evidence that Respondent referred MR to a dentist.

On both the January 17 and March 30 progress notes, Respondent also listed a diagnosis of substance abuse. *Id.* at 5, 7. However, Respondent did not document the basis for his diagnosis. *Id.* At MR's final visit, Respondent no longer listed a diagnosis of substance abuse. However, he now documented that MR had right shoulder pain as the result of a motor vehicle accident. *Id.* at 3; Tr. 671. Respondent testified that MR had gone to the emergency room, but that he had not obtained those records. Tr. 671.

When asked whether MR's tooth pain ''was no longer an issue in the subsequent visits''; Respondent maintained that ''I just didn't enter it.'' *Id.* at 672. As for the diagnosis of substance abuse, Respondent did not note in MR's chart the substances he abused, and Respondent could not remember during his testimony.[12] *Id.* at 668–69; GX 5G.

On June 24, 2010, a DI phoned MR and interviewed him. *Id.* at 271. The DI asked MR whether he was seeing Respondent for chronic pain or for addiction; MR stated that ''he was addicted.'' *Id.* at 271–72. MR also said that he paid $100.00 cash for each visit. *Id.* at 272. MR was treated with Suboxone, which was written on an X prescription pad. Tr. 474; GX 5G, at 6, 8. Respondent believed his treatment of MR was appropriate. Tr. 475.

SHY

SHY first saw Respondent on December 13, 2009. GX 5D, at 8. On the intake form, SHY listed his medications as Suboxone and Zyprexa. *Id.* at 1. Respondent diagnosed SHY as having chronic pain even though he circled ''NO'' for whether SHY had pain, did not note the location of the pain, and did a physical examination during which he found all areas normal. *Id.* at 8. Moreover, Respondent did not document a history of the pain, whether any treatments had been previously tried, and the pain's effect on his psychological and physical function at this visit. *Id.* Respondent also did not document having taken SHY's vital signs.[13] *Id.*

At SHY's subsequent visits, Respondent continued to document that SHY had chronic pain even though he repeatedly noted that he had ''NO'' pain, never found anything that was not normal during the physical exams, and never listed a location of any pain. *Id.* at 4, 6. Respondent also noted a diagnosis of substance abuse on two separate occasions, but did not document SHY's history of substance abuse and what substances he was abusing. *Id.* He did, however, require SHY to undergo a drug screen at the first visit, the results of which were negative with the exception of the test for synthetic opioids, which was consistent with SHY having indicated that his medications included Suboxone. *Id.* at 1, 10–11.

On June 22, 2010, a DI called SHY, and asked him why he was seeing Respondent. Tr. 288. SHY said that he was being treated for opiate addiction and that he was not being treated for chronic pain. *Id.* at 288–89.

At the hearing, Respondent testified that he thought SHY was probably abusing either Lorcet or Oxycontin. *Id.* at 659. However, he then admitted that he did not document this. *Id.* Respondent then claimed that SHY ''probably had a little marijuana or something like that in a drug screen, and that's where we probably gave him a substance abuse diagnosis.'' *Id.* at 660. SHY did not, however, test positive for THC. *See* GX 5D, at 10–11. Respondent also admitted that he ''did not document * * * any details of the pain,'' but then stated that ''[a] lot of these people with major depression have pain from the depression, but we still put a diagnosis of potential chronic pain.'' *Id.* at 468, *see also id.* at 655–56. Respondent acknowledged that he inappropriately prescribed other medications than Suboxone using his X number to SHY. *Id.* at 468. Respondent believed his care of SHY was within the standard of care. *Id.* 469–70.

[12] The ALJ found credible Respondent's testimony that he had also diagnosed MR with bipolar disorder, but that he had failed to annotate that in the patient's chart as well. Tr. 474.

[13] Respondent also diagnosed SHY as having major depression.

JC2

Respondent treated JC2 for chronic pain, substance abuse, attention deficit disorder, and extreme anxiety. Tr. 458; GX 5C. Respondent acknowledged that JC2 was ''a tough patient,'' who had been ''fired'' by other doctors and had abused Xanax. Tr. 458–60. A note in JC2's chart dated ''9–1–09'' indicates that a friend of JC2 had stated that he was taking twelve Xanax pills at a time. GX 5C, at 3.

Respondent noted in the chart that JC2 was abusing Xanax and ''MUST STOP XANAX.'' *Id.* at 2, 12; *see also* Tr. 459–60, 628. In his testimony, Respondent stated that his treatment plan was to gradually taper JC2 off Xanax, which could take up to a year, or to manage JC2's intake. Tr. 460–62, 630. The chart also notes that in November 2009, JC2 missed two appointments and was jailed for distribution. GX 5C, at 8. The chart also again notes ''Reported taking [greater than] #12 Xanax @ a time.'' *Id.* Respondent also testified that he knew ''for a fact in this young man's history [that] he has been jailed before'' for ''doing things [that were] inappropriate.'' Tr. 631.

The ALJ found that Respondent credibly testified that he could not just cease prescribing Xanax to JC2 because he could have seizures. *Id.* at 460–61. However, the patient file shows that notwithstanding Respondent's testimony that he planned to taper JC2 off of Xanax, he actually increased the daily doses of the prescriptions. *Compare* GX 5C, at 11 (Aug. 30, 2009 RX for 30 tablets of Xanax 1.0 mg, ½ BID (for daily dose of 1 mg)), *with id.* at 10 (Oct. 25, 2009 RX for 90 tablet of Xanax 1.0 mg., 1 TID (for daily dose of 3 mg)), *with id.* at 5 (Apr. 17, 2010 RX for 60 tablets of Xanax 2.0 mg, 1q12, with 2 refills (for daily dose of 4 mg)). The chart also demonstrates that Respondent wrote multiple Xanax and Suboxone prescriptions under his X number prior to February 28, 2010. GX 5C, at 7, 9–11, 13. Respondent testified that he conducted drug screens on JC2, but the results of these tests were not in JC2's medical record. Tr. 633–34.

Respondent testified that he prescribed Suboxone to treat JC2's substance abuse and that substance abuse was JC2's primary diagnosis. *Id.* at 643, 645. Moreover, a note for a visit of April 5, 2009, states ''Desires To Get OFF Narcotics.'' GX 5C, at 15. Respondent also testified that JC2 was being seen for chronic pain caused by a football injury when he was a teenager, but he then admitted that JC2's chart does not document the source or severity of that pain. Tr. 654–55. Nor did Respondent document the history of the pain, any prior treatments for it and its effect on JC2's functioning. *See* GX 5C. Respondent maintained, however, that he knew JC2's history and ''that he's had a lot of problems.'' Tr. 655.

Respondent also testified that JC2 had been in a narcotic treatment program in 2007 or 2008 and had left against medical advice. *Id.* at 631–632. Yet Respondent did not document this in JC2's chart and did not obtain his treatment records from the narcotic treatment facility. GX 5C. Respondent believed he treated JC2 within the standard of care. Tr. 461.

DA

DA saw Respondent three times: in December 2009, and in January and February of 2010. GX 5K. According to the progress note for the first visit, Respondent diagnosed DA with chronic pain and anxiety. *Id.* at 3. Respondent circled ''YES'' for whether DA had pain and noted that the location was his back and both legs. *Id.* Respondent did not, however, document the nature and intensity of the pain, its history, whether any treatments had been previously tried, and the pain's effect on his psychological and physical function at either this visit or his next visit. *Id.* at 3. Moreover, the progress notes for DA's first two visits (there is no note for a third visit on Feb. 21, 2010, even though there is a prescription for this date), indicate that Respondent performed a physical examination and found all areas normal. *Id.* Respondent did not document DA's vital signs for either visit. *Id.* Respondent also noted a diagnosis of substance abuse at DA's second visit but did not document the basis for this diagnosis. *Id.* Respondent issued DA prescriptions for both Suboxone and Xanax at all three visits, including on the second visit when he noted that DA had ''NO'' pain; on each occasion, Respondent issued the prescriptions under his X number. *Id.* at 4–5.

On June 1, 2010, the lead DI interviewed DA by phone. Tr. 85. DA told the DI that he was addicted to pain killers and that Respondent was treating him for this condition and not for chronic pain. *Id.* at 85–87. In his testimony, Respondent admitted that he did not get DA's medical records for his pain condition but maintained that he was familiar with this patient from treating him in the emergency department of the Red Bay Hospital. Tr. 693; *see generally* GX 5K. Respondent believed that his care was appropriate for DA. Tr. 482.

AH

Respondent saw AH four times beginning on December 13, 2009, and ending on March 28, 2010. GX 5S. Respondent noted that AH was taking 12 Lortab 10 mg a day, which she was getting ''from doctors, friends, [and] off the street.'' Tr. 493. Respondent diagnosed AH with both substance abuse and chronic pain as a secondary diagnosis. GX 5S, at 3. While Respondent noted ''YES'' for whether AH had pain, he did not document the nature, intensity and location of the pain; the history of the pain; what treatments had been used; and the pain's effect on her physical and psychological functioning. *Id.* at 3. Respondent also noted that AH was undergoing withdrawal, was agitated/moody, had insomnia and a positive MDQ. *Id.* AH's physical exam was normal and Respondent did not document having taken her vital signs. *Id.* At this visit, Respondent prescribed Suboxone to her under his X number. GX 5S, at 4.

At AH's second visit (Feb. 1), Respondent noted that she had ''NO'' pain and did not make any other findings about her pain; he also indicated that she did not demonstrate withdrawal, that she was not agitated or moody and did not have insomnia or a positive MDQ. GX 5S, at 7. Respondent did not note any abnormalities in the physical exam and did not document having taken AH's vital signs. *Id.* Respondent noted his diagnosis as Suboxone 16 mg. and gave AH a prescription for Suboxone which he wrote under his X number. *Id.* at 8.

On Feb. 28, Respondent issued AH a third prescription for Suboxone, again using his X number. *Id.* at 8. The progress note for this visit, however, lists AH's name, date of birth and a visit date but contains no medical information. *Id.* at 7.

On March 28, AH again saw Respondent. *Id.* at 5. At this visit, Respondent circled ''YES'' for whether she had pain and noted its location as her neck and back. *Id.* Once again, he did not document the nature and intensity of the pain, the history of the pain, what treatments had been used, and the pain's effect on her physical and psychological functioning. *Id.* Again, Respondent performed a physical exam but found no abnormalities; he also did not document having taken AH's vital signs. *Id.* Respondent made diagnoses of both chronic pain and substance abuse. *Id.* Respondent issued AH a new prescription for Suboxone, which was written on a prescription form that contained both of his numbers. *Id.* at 6.

Respondent testified that AH had some neck and back pain, but ''appeared to be functional.'' Tr. 493. He was also ''not convinced that [he] could not add the substance abuse potential to her.'' *Id.* Respondent stated that his treatment of AH was within the standard of care. *Id.* at 494.

NK

NK saw Respondent three times during February and March 2010. GX 5U. On the intake form, NK listed his medications as Suboxone and Xanax. *Id.* at 2. On the progress note for NK's first visit, Respondent noted that he had ''NO'' pain and did not indicate a location for any pain. *Id.* at 3. Respondent noted that he had performed a physical examination, but found no abnormalities; Respondent also did not document having taken NK's vital signs. *Id.* Respondent nonetheless diagnosed NK as having both chronic pain and anxiety (but not substance abuse) and gave him prescriptions for Suboxone and Xanax, both of which were written under his X number. *Id.* at 5.

On March 9, Respondent issued NK a second prescription for Suboxone, and on March 21, he issued NK prescriptions for both Suboxone and Xanax. *Id.* at 4–5. However, the progress note dated Mar. 9 contains no medical information and there is no note for Mar. 21. *See generally* GX 5U.

On May 25, 2010, the lead DI interviewed NK. Tr. 78. NK stated that Respondent was treating him for opiate addiction, and not for any other medical problem including chronic pain. *Id.* at 79. NK also told the DI that he was no longer seeing Respondent and that ''he would kick the habit himself.'' *Id.* at 78. NK's chart also contains a prescription for Suboxone dated April 17, 2010, even though NK did not see Respondent on that date. GX 5U, at 6. Respondent explained that he had prepared the prescription in advance of NK's visit, but that ''no one gets that prescription unless I hand it to them.'' Tr. 497.

Respondent's Post-Suspension Conduct

On September 27, 2010, Respondent was personally served with the Order to Show Cause and Immediate Suspension of Registration. At that time, the lead DI explained to Respondent that, as of that date, he was no longer authorized to prescribe or handle any controlled substances. Tr. 112–13. Respondent told the DI that ''he was not going to abide by this order and that (the DI) didn't have the authority to tell him that he couldn't prescribe any controlled substances.'' *Id.* at 113.

Thereafter, the lead DI discovered that Respondent had issued controlled-substance prescriptions which were dated September 29, October 3 and October 4, 2010. Tr. 114; GX 6. While the ALJ found that there were a total of four post-suspension prescriptions, two of the prescription forms contained prescriptions for two controlled substances. ALJ at 34; *but see* GX 6, at 3–4.

The first prescription, which was issued to CW and dated September 29, 2010, was for the drug Adderall, a schedule II controlled substance. GX 6, at 1. CW told the lead DI that Respondent wrote the prescription after she had been seen by Respondent's Physician's Assistant, CC. CW picked up the prescription the next day, September 30. Tr. 115–118; GX 6, at 1. Respondent admitted to signing this prescription. Tr. 506–07; *see also* RX 29, at 17–19 (CW's chart for Sept. 29, 2010 visit).

The second prescription, which was issued to JB and dated October 3, 2010, was also for Adderall. Tr. 118–19, 200–01; GX 6, at 2. However, the evidence showed that Respondent had issued the prescription on September 3, 2010. Tr. 119–20, 508, 733–34. This prescription did not, however, include Respondent's registration number and listed only his X number. GX 6, at 2.

The lead DI contacted the pharmacist who filled the prescription, and was told that the pharmacy would not accept a post-dated prescription for a scheduled drug. Tr. 123. The pharmacist remembered this prescription and further stated that it had actually been presented for filling on October 3, 2010. Tr. 123–24, 158–59. The lead DI testified that while it would have been permissible to write a prescription and sign it on September 3, 2010, with the annotation of ''do not fill until October 3, 2010,'' it was not permissible for Respondent to sign a schedule II prescription on September 3 but date the prescription for October 3rd. Tr. 124.

The evidence also included two prescriptions issued (on a single prescription form) to MK and dated October 4, 2010; the prescriptions were for 60 Adderall and 90 Lortab 10 mg, another schedule III narcotic. GX 6, at 3. The lead DI contacted MK about the prescriptions; MK confirmed that the prescriptions were written and received on October 4, 2010. Tr. 124–25. While Respondent testified that the prescriptions had been post-dated, he admitted to having written the prescriptions on September 29, two days after he was served with the Immediate Suspension Order. Tr. 508–09; 740–41. Respondent maintained that the prescription was given to MK by mistake. *Id.* at 741. MK's patient file includes a progress note which establishes that she saw Respondent on September 29, 2010. RX 32, at 28. Notwithstanding the testimony regarding MK's statement as to the date the prescriptions were written, I find that the prescriptions were written on September 29.

The evidence also included two prescriptions which were issued to DH and also dated October 4, 2010. GX 6, at 4. The prescriptions were for 90 Lortab 10 mg and 90 Xanax 1 mg. Tr. 126, 509; GX 6, at 4.

Respondent testified that he thought that he had seen DH in September but that he did not know ''exactly which day I saw him.'' Tr. 509. Respondent admitted, however, that the prescription was in his handwriting and that he ''signed it.'' Continuing, he maintained that he did not have an explanation for it, that ''[t]his was an accident,'' and that he ''would never do anything to violate an order.'' *Id.* at 509.

According to DH's patient file, DH saw Respondent on September 29, 2010.[14] RX 31, at 28. The chart for the visit noted that DH was ''Here for med refills'' and that he was ''here for Dr. Cochran,'' and that his ''Current Meds'' were Lortab and Xanax. *Id.* In addition, Respondent signed the chart. *Id.* I therefore find that Respondent wrote the prescriptions on September 29.

Respondent's Testimony

Respondent maintained that some of the patients did not know what they were being treated for. Tr. 743–44. However, Respondent did not document any patient's lack of understanding of his diagnosis in the patient files. Tr. 745. Moreover, the ALJ did not find this testimony credible. ALJ at 49.

As noted above, Respondent provided evidence that he had stopped prescribing methadone to his patients. Moreover, Respondent established that he had stopped using his X number to write prescriptions for drugs other than Suboxone and when prescribing Suboxone to treat pain. However, on September 3, 2010, Respondent wrote a further controlled substance prescription for Adderall (which was post-dated) under his X number. GX 6, at 2.

Respondent also testified that he maintained the drugs screens he ordered on his patients in a separate file which he called the ''Drug Screen Book.'' Tr. 687. Respondent testified that when the

[14] DH's previous visit was on August 4, 2010. RX 31, at 30.

DIs obtained the patient files, they did not take the Drug Screen Book.'' *Id.* Respondent did not, however, submit the Drug Screen Book for the record.

Respondent agreed that his patient charts were incomplete. Tr. 452. In one case Respondent testified that his record keeping was incorrect and he had mistakenly written the wrong primary diagnosis for the patient. *Id.* at 654. Respondent, however, offered no evidence that he was prepared to comply with the Alabama Board's *Guidelines For The Use Of Controlled Substances For The Treatment Of Pain. See* Ala. Admin Code r.540–x–4–.08.

Discussion

Section 304(a) of the Controlled Substances Act provides that a ''registration pursuant to section 823 of this title to * * * dispense a controlled substance * * * may be suspended or revoked by the Attorney General upon a finding that the registrant * * * has committed such acts as would render his registration under section 823 of this title inconsistent with the public interest as determined under such section.'' 21 U.S.C. 824(a)(4). In determining the public interest, Congress directed that the following factors be considered:

(1) The recommendation of the appropriate State licensing board or professional disciplinary authority.

(2) The applicant's experience in dispensing * * * controlled substances.

(3) The applicant's conviction record under Federal or State laws relating to the manufacture, distribution, or dispensing of controlled substances.

(4) Compliance with applicable State, Federal, or local laws relating to controlled substances.

(5) Such other conduct which may threaten the public health and safety.

21 U.S.C. 823(f). In addition, pursuant to 21 U.S.C. 824(d), ''[t]he Attorney General may, in his discretion, suspend any registration simultaneously with the institution of proceedings under this section, in cases where he finds that there is an imminent danger to public health or safety.''

The public interest factors are considered in the disjunctive. *Robert A. Leslie,* 68 FR 15227, 15230 (2003). I may rely on any one or a combination of factors and may give each factor the weight I deem appropriate in determining whether to revoke an existing registration or to deny an application for a registration. *Id.* Moreover, I am ''not required to make findings as to all of the factors.'' *Hoxie* v. *DEA,* 419 F.3d 477, 482 (6th Cir. 2005); *see also Morall* v. *DEA,* 412 F.3d 165, 173–74 (DC Cir. 2005).

The Government has ''the burden of proving that the requirements for * * * revocation or suspension pursuant to section 304(a) * * * are satisfied.'' 21 CFR 1301.44(e); *see also* 21 CFR 1301.44(d) (Government has ''the burden of proving that the requirements for [a] registration pursuant to section 303 * * * are not satisfied''). However, where the Government satisfies its *prima facie* burden, the burden then shifts to the registrant to demonstrate why he can be entrusted with a new registration. *Medicine Shoppe-Jonesborough,* 73 FR 364, 380 (2008).

Having considered all of the factors, I conclude that the Government's evidence pertinent to factors two (Respondent's experience in dispensing controlled substances) and four (Respondent's compliance with applicable laws related to controlled substances), establishes that Respondent has committed acts which render his registration ''inconsistent with the public interest.'' 21 U.S.C. 824(a)(4). I further conclude that Respondent has not rebutted the Government's *prima facie* case.

Factors One and Three—The Recommendation of the State Board and Respondent's Record of Convictions Under Laws Relating to the Manufacture, Distribution and Dispensing of Controlled Substances

The record establishes that the State Board has an open investigation of Respondent. However, the Board has not made a recommendation in this matter, and it is undisputed that Respondent's medical license remains active and unrestricted. Accordingly, this factor does not support a finding either for, or against, the continuation of Respondent's registration. *See Joseph Gaudio,* 74 FR 10083, 10090 n.25 (2009); *Mortimer B. Levin,* 55 FR 8209, 8210 (1990).

There is also no evidence in the record that Respondent has been convicted of an offense related to the manufacture, distribution or dispensing of controlled substances. While this factor supports the continuation of Respondent's registration, DEA has long held that this factor is not dispositive. *See, e.g., Edmund Chein,* 72 FR 6580, 6593 n.22 (2007).

Factors Two and Four—Respondent's Experience in Dispensing Controlled Substances and Compliance With Applicable Laws Related to Controlled Substances

The record establishes that Respondent violated numerous provisions of Federal law and DEA regulations. These include: (1) The prescribing of methadone for substance abuse treatment without being registered to do so under 21 U.S.C. 823(g)(1), in violation of 21 U.S.C. 841(a)(1); (2) the prescribing of methadone for substance abuse treatment, in violation of 21 CFR 1306.04(c) and 1306.07; (3) prescribing controlled substances without a legitimate medical purpose, in violation of 21 CFR 1306.04(a); (4) the post-dating of prescriptions, in violation of 21 CFR 1306.05(a); and (5) prescribing controlled substances when his registration had been suspended, in violation of 21 U.S.C. 843(a)(2).

The Methadone Prescriptions

Under 21 U.S.C. 823(g)(1), ''practitioners who dispense narcotic drugs to individuals for maintenance treatment or detoxification treatment shall obtain annually a separate registration [from their practitioner's registration] for that purpose.''[15] In the Drug Addiction Treatment Act of 2000, Congress provided that the requirement to obtain a separate registration is ''waived in the case of the dispensing (including the prescribing), by a practitioner, of narcotic drugs *in schedule III, IV, or V* or combinations of such drugs if the practitioner meets the conditions specified in [section 823(g)(2)(B)] and the narcotic drugs or combinations of such drugs meet the conditions specified in [section 823(g)(2)(C)].'' *Id.* § 823(g)(2)(A) (emphasis added).

Methadone is, however, a schedule II narcotic, and thus, except for where a patient presents with acute withdrawal symptoms (and then for no more than a total of three days), cannot be lawfully dispensed for the purpose of maintenance or detoxification treatment absent the practitioner's holding a registration under section 823(g)(1). *See* 21 U.S.C. 812(c) (Schedule II (b)(11)); 21 CFR 1308.12(c)(15). Moreover, under DEA's regulations, ''[a] prescription may not be issued for 'detoxification treatment' or 'maintenance treatment,' unless the prescription is for a Schedule III, IV, or V narcotic drug approved by the Food and Drug Administration

[15] An applicant for registration under this provision must meet three requirements: (1) The applicant must be ''determined by the Secretary [of HHS] to be qualified * * * to engage in the treatment with respect to which registration is sought; (2) the Attorney General must ''determine[] that the applicant will comply with standards * * * respecting (i) security of stocks of narcotic drugs for such treatment, and (ii) the maintenance of records * * *. on such drugs,'' and (3) ''if the Secretary determines that the applicant will comply with standards * * * respecting the quantities of narcotic drugs which may be provided for unsupervised use by individuals in such treatment.'' 21 U.S.C. 823(g)(1).

specifically for use in maintenance or detoxification treatment.'' 21 CFR 1306.04(c).[16] *See also id.* 1306.07(a) (''A practitioner may administer or dispense directly (*but not prescribe*) a narcotic drug listed in any schedule * * * for the purpose of maintenance or detoxification treatment if the practitioner * * * is separately registered with DEA as a narcotic treatment program [and] is in compliance with DEA regulations regarding treatment qualifications, security, records, and unsupervised use of the drugs pursuant to the [CSA].'') (emphasis added); *id.* 1306.07(b) (''Nothing in this section shall prohibit a physician * * * from administering (*but not prescribing*) narcotic drugs to a person for the purpose of relieving acute withdrawal symptoms when necessary while arrangements are being made for referral for treatment. Not more than one day's medication may be administered to the person or for the person's use at one time. Such emergency treatment may be carried out for not more than three days and may not be renewed or extended.'') (emphasis added).

Also relevant here is the definition of the term ''maintenance treatment.'' 21 U.S.C. 802(29). Under the CSA, the term ''means the dispensing, for a period in excess of twenty-one days, of a narcotic drug in the treatment of an individual for dependence upon heroin or other morphine-like drugs.'' *Id.*[17]

Finally, Respondent claimed that most of the patients whose files were introduced into evidence (including some of the methadone patients) were chronic pain patients. Under a longstanding DEA regulation, to be effective, ''[a] prescription for a controlled substance * * * must be issued for a legitimate medical purpose by an individual practitioner acting in the usual course of his professional practice.'' 21 CFR 1306.04(a). As the Supreme Court has explained, ''the prescription requirement * * * ensures patients use controlled substances under the supervision of a doctor so as to prevent addiction and recreational abuse. As a corollary, [it] also bars doctors from peddling to patients who crave the drugs for those prohibited uses.'' *Gonzales* v. *Oregon,* 546 U.S. 243, 274 (2006) (citing *United States* v. *Moore,* 423 U.S. 122, 135, 143 (1975)).

Under the CSA, it is fundamental that a practitioner must establish and maintain a bonafide doctor-patient relationship in order to act ''in the usual course of * * * professional practice'' and to issue a prescription for a ''legitimate medical purpose.'' *Laurence T. McKinney,* 73 FR 43260, 43265 n.22 (2008); *see also Moore,* 423 U.S. at 142–43 (noting that evidence established that physician ''exceeded the bounds of 'professional practice,''' when ''he gave inadequate physical examinations or none at all,'' ''ignored the results of the tests he did make,'' and ''took no precautions against * * * misuse and diversion''). The CSA, however, generally looks to state law to determine whether a doctor and patient have established a bonafide doctor-patient relationship. *See Kamir Garces-Mejias,* 72 FR 54931, 54935 (2007); *United Prescription Services, Inc.,* 72 FR 50397, 50407 (2007).

By regulation, the Alabama Board of Medical Examiners has adopted *Guidelines For The Use of Controlled Substances For The Treatment of Pain. See* Ala. Admin. Code r. 540–X–4-.08. According to the Board, the ''guidelines are not intended to define complete or best practice, but rather to communicate what the Board considers to be within the boundaries of professional practice.'' *Id.* (1)(g). Guideline (2)(a), which is captioned ''Evaluation of the Patient,'' states:

> A complete medical history and physical examination must be conducted and documented in the medical record. The medical record should document the nature and intensity of the pain, current and past treatments for pain, underlying or coexisting diseases or conditions, the effect of the pain on physical and psychological function, and history of substance abuse. The medical record also should document the presence of one or more recognized medical indications for the use of a controlled substance. *Id.* (2)(a).[18]

The record contains substantial evidence that Respondent prescribed methadone to opiate addicted patients for the purpose of providing maintenance treatment. During his initial interview (on Feb. 28, 2010) with the Investigators, Respondent told them that ''he was operating a detox clinic where he was using methadone to get his patients onto Suboxone.'' Tr. 43. It was not until later that day, when the Investigators interviewed Respondent for the second time, that he claimed that he prescribed methadone for pain and that he had previously misspoken. *Id.* at 55.

Other evidence supports the conclusion that Respondent was prescribing methadone to provide maintenance or detoxification treatment to opiate addicted patients. On the date of the visit, Investigators interviewed JKB, who told them that he was being treated by Respondent with methadone for opiate addiction. *Id.* at 52. JKB further stated that he had previously gone to a narcotic treatment program, which used methadone, and that he was seeing Respondent because the latter charged less. *Id.* at 52–53. JKB also stated that Respondent was not treating him for chronic pain. *Id.* at 53.

The Government introduced into evidence seven files of patients who received methadone prescriptions from Respondent. GXs 5X; 5O; 5A; 5N; 5L; 5M; and 5T. The Government also elicited the testimony of the DIs to the effect that they had interviewed several of the patients to determine what condition they were being treated for.

Patient TP related that she had gone to Respondent because she had heard that he was using methadone to treat addiction; TP also noted on her intake form that she had previously gone to a methadone clinic and was taking twelve tablets of methadone 10 mg strength a day. Respondent issued her prescriptions for methadone on three separate dates over the course of a month, and ultimately TP returned to a methadone clinic.

While Respondent maintained that TP had been going to the methadone clinic for pain, he conceded that the purpose of a methadone clinic is to treat addiction. Moreover, while Respondent noted diagnoses of both chronic pain and substance abuse on TP's progress

[16] *See also* 21 CFR 1306.07(d) (''A practitioner may administer or dispense (including prescribe) any Schedule III, IV, or V narcotic drug approved specifically by the Food and Drug Administration specifically for use in maintenance or detoxification treatment to a drug dependent person if the practitioner complies with the requirements of [21 CFR 1301.28].'' 21 CFR 1301.28 is the provision which implements the DATA Waiver Act.

[17] The CSA also defines the term ''detoxification treatment.'' 21 U.S.C. 802(30). The term ''means the dispensing, for a period not in excess of one hundred and eighty days, of a narcotic drug in decreasing doses to an individual in order to alleviate adverse physiological or psychological effects incident to withdrawal from the continuous or sustained use of a narcotic drug and as a method of bringing the individual to a narcotic drug-free state within such period.'' *Id.*

[18] *See also* Ala. Admin. Code r. 540–X–4.08(2)(b) (''The written treatment plan should state objectives that will be used to determine treatment success, such as pain relief and improved physical and psychosocial function, and should indicate if any further diagnostic evaluations or other treatments are planned.'').

The Guidelines also provide that:

The physician should keep accurate and complete records to include

1. The medical history and physical examination;
2. Diagnostic, therapeutic and laboratory results;
3. Evaluations and consultations;
4. Treatment objectives;
5. Discussion of risks and benefits;
6. Treatments;
7. Medications (including date, type, dosage and quantity prescribed);
8. Instructions and agreements;
9. Periodic reviews.

Id. 2(f).

notes, he did not document having taken a medical history, the nature and intensity of any pain, current and past treatments for paint, and its effect on her physical and psychological functioning.

I thus conclude that Respondent prescribed methadone to TP for maintenance or detoxification purposes and not to treat chronic pain. In doing so, he violated the CSA because he did not have the registration required under section 823(g)(1) to dispense methadone for this purpose; he also violated DEA regulations which prohibit the prescribing of narcotic drugs for this purpose except for those drugs in schedules III through V which have been specifically approved by the FDA to provide maintenance or detoxification treatment. 21 CFR 1306.04(c).

The DIs also interviewed MB, who stated that she was being treated by Respondent for an addiction to Lorcet and not for chronic pain. Respondent testified, however, that he was treating MB both for chronic pain cause by headaches and substance abuse. Respondent prescribed methadone to her on six different dates.

Notably, the Government did not produce any evidence corroborating MB's statement that she was not being treated for chronic pain. *See Consolidated Edison Co.* v. *NLRB,* 305 U.S. 197, 230 (1938) (''Mere uncorroborated hearsay * * * does not constitute substantial evidence.). However, even if this evidence is not sufficient to establish that Respondent was treating her only for substance abuse and crediting his testimony that he was also treating her for chronic pain, I conclude that the prescriptions were unlawful.

Notably, Respondent did not document the nature and intensity of her pain, its effect on both her physical and psychological function, any prior or current treatment for it, and her history of substance abuse. *See* Ala. Admin Code r.540–X–4.08(2)(a). Accordingly, because Respondent did not make any of the findings required under the Alabama guidelines, I conclude that he did not have a basis for his diagnosis of chronic pain. I thus conclude that Respondent acted outside of ''the usual course of * * * professional practice'' and lacked a ''legitimate medical purpose'' in issuing the methadone prescriptions to MB and violated Federal law. 21 CFR 1306.04(a).[19]

Respondent issued three methadone prescriptions (on Feb. 9, 23, and Mar. 9) to JC1 (GX 5N), each of which was for 210 tablets with a daily dose of 150 mg. Respondent admitted that JC1 had come from another methadone clinic even though he denied that JC1 had gone to the clinic to be treated for addiction and maintained that he had gone there for pain management. Moreover, while Respondent also maintained that JC1 had come to him because ''he wanted to take a cleaner medicine for his pain,'' when Respondent stopped writing methadone prescriptions, JC1 decided to go to another treatment facility.

In addition, notwithstanding Respondent's claim that he was treating JC1 for pain, at his first two visits (and at which Respondent prescribed methadone), Respondent noted that JC1 had ''NO'' pain; and at the third visit, where he issued a further methadone prescription, Respondent did not even make a progress note. Respondent also failed to document any of the findings set forth in Alabama's Guideline 2(a). Accordingly, I conclude that Respondent prescribed methadone to JC1 for maintenance/detoxification purposes without the required registration and violated DEA regulations which prohibit the prescribing of schedule II narcotics for this purpose. 21 U.S.C. 823(g)(1); 21 CFR 1306.04(c).

JB also came to Respondent from a narcotic treatment program, which he had been kicked out of. Respondent noted this in the chart and that JB ''desire[d] to get off methadone.'' Respondent asserted that the fact that JB had been treated at a methadone clinic did not mean that the clinic was treating him for addiction, even though that is the purpose of a methadone clinic; moreover, he admitted that he did not obtain JB's records from the clinic. After Respondent stopped prescribing methadone to JB, the latter went to another methadone clinic.

While Respondent documented that JB had foot and knee pain, and the progress notes include a few additional statements regarding his pain such as the location and that JB had been in an accident, the notes do not document the nature and intensity of pain, any prior treatments for it, and its effect on JB's functioning. Moreover, Respondent noted that he planned to put JB on his alternative medication program. Given JB's prior history of substance abuse treatment and his express ''desire to get off methadone,'' I conclude that Respondent's primary purpose in prescribing methadone to him (which he did on three occasions over a month) was to provide maintenance/detoxification treatment. I thus conclude that Respondent violated the CSA and DEA regulations in doing so. 21 U.S.C. 823(g)(1); 21 CFR 1306.04(c).

Respondent testified that NB told him at the initial visit that she had been on 180 mg of methadone which she was taking for pain. He also testified that she was a ''troubling patient'' because she was on both methadone and Xanax and that this was a great concern, especially if she mixed the drugs with alcohol. Respondent diagnosed NB as having chronic pain even though he noted on her chart that she had ''NO'' pain, and he did not document any further findings to support a diagnosis of chronic pain. Moreover, notwithstanding his express concern that NB was on both methadone and Xanax, Respondent prescribed Xanax to her and did not document that she had anxiety, although he maintained in his testimony that she ''had some anxiety.''

The evidence is insufficient to support the conclusion that NB sought treatment from Respondent for a substance abuse problem. However, the evidence does support the conclusion that Respondent acted outside of the usual course of professional practice and lacked a legitimate medical purpose in prescribing methadone to her. 21 CFR 1306.04(a). Having noted on NB's chart that she had ''NO'' pain, and having failed to document any further findings as required by the Guidelines to support his chronic pain diagnosis (and to explain the inconsistency between his diagnosis and his notation that she had no pain), it is clear that Respondent lacked a legitimate medical purpose in prescribing methadone to her.

KI noted on her intake form that she was using three controlled substances: methadone, Xanax and Ambien. Respondent also acknowledged that KI had previously been treated at a narcotic treatment facility and that she had taken narcotics and become addicted to them. However, he denied that KI had told her that she had gone to the methadone clinic to treat her addiction—as if there was any other reason a person would seek treatment from a methadone clinic. While Respondent maintained that KI had diagnoses of both substance abuse and chronic pain, on the progress note for her initial visit, he noted that she had ''NO'' pain although he wrote ''Back'' as the location. Respondent did not document any findings that would explain the inconsistency between his diagnosis and his having noted that KI had ''NO'' pain; he also did not document the history of any pain, what

[19] As explained above, if Respondent was treating MB for substance abuse, the methadone prescriptions were illegal because methadone cannot be prescribed for this purpose and because he did not hold the required registration. *See* 21 U.S.C. 823(g)(1); 21 CFR 1306.07(a) & (b).

treatment had been used, and the pain's effect on her physical and psychological functioning.

Respondent issued three methadone prescriptions to KI. I conclude that Respondent's purpose in doing so was not to treat pain, but to provide maintenance/detoxification treatment to her. I thus conclude that Respondent violated Federal law by prescribing methadone to KI for maintenance/detoxification treatment without the required registration and violated DEA regulations which prohibit the prescribing of schedule II narcotics for this purpose. 21 U.S.C. 823(g)(1); 21 CFR 1306.04(c).[20]

The Suboxone Prescriptions

As found above, Respondent also prescribed Suboxone, a schedule III controlled substance, to numerous patients. The Government elicited the testimony of the DIs as to phone interviews they conducted with sixteen of these patients, the majority of whom said that Respondent was treating them for substance abuse and not chronic pain. *See* Tr. at 78 (NK); *id.* at 80–81 (AG); *id.* at 82–83 (LM); *id.* at 83–84 (ET); *id.* at 85–87 (DA); *id.* at 87–88 (CT); *id.* at 89–90 (JH); *id.* at 92–94 (KP); *id.* at 95–98 (SS); *id.* at 266–67 (CML); *id.* at 268–69 (SJW); *id.* at 270 (LMJ); *id.* at 271 (MR); *id.* at 288–89 (SHY).

As found above, Respondent testified that many of these patients were actually being treated for chronic pain in addition to substance abuse, or were just being treated for chronic pain. Moreover, Respondent frequently noted both diagnoses on the patient's charts, although in some instances he did not note a substance abuse diagnosis until after the first visit (and sometimes not until after several visits). *See, e.g.,* GX 5P (AG); GX 5V (LM); GX 5Y (CT); GX 5R (JH); GX 5B (TB); GX 5J (SW); GX 5I (SJW); GX 5E (LMJ); GX 5D (SHY); GX 5K (DA).

However, even if it is the case that most of the Suboxone patients were being treated only for substance abuse, the Government did not offer any evidence (whether in the form of clinical standards or expert testimony) establishing what the appropriate course of professional practice requires of a physician treating patients for substance abuse.[21] In short, while in its brief, the Government repeatedly argues that Respondent lacked a medical justification to support his diagnosis of substance abuse for the various patients and his issuance of the Suboxone prescriptions, the Government's failure to offer any probative evidence as to the standards of medical practice for diagnosing and treating a substance abuse patient precludes a finding that Respondent lacked a legitimate medical purpose when he prescribed Suboxone to these patients.

Respondent, however, testified that many of the Suboxone patients were actually being treated for chronic pain, and he noted this as his primary diagnosis in many of their charts. As explained above, the Alabama Guidelines require that a physician who prescribes controlled substances to treat pain, obtain ''[a] complete medical history'' and document this in the patient's medical record. Moreover, the Guidelines state that the record ''should document the nature and intensity of the pain, current and past treatments for pain, underlying or coexisting diseases or conditions, the effect of the pain on physical and psychological function, and history of substance abuse.'' Ala. Admin. Code r. 540–X–4–.08(2)(A).

As found above, at the initial visits of nine of the Suboxone patients, Respondent diagnosed them as having chronic pain but not substance abuse. *See supra* Findings for Patients SS, ET, KP, CL, CML, MR, SHY, DA, and NK. Notwithstanding his diagnosis, Respondent typically did not even list a location of a patient's purported pain and/or did not list a location until after the patient had made several visits. *See supra* Findings for ET, KP, CL, CML, SHY, NK. Moreover, Respondent did not document the nature and intensity of the patient's pain, the pain's effect on the patient's ability to function, and rarely documented any past treatments for the pain, and the patient's substance abuse history at either the initial visit or follow-up visits.[22]

Tellingly, in the charts, Respondent frequently noted that the patients had ''NO'' pain, yet nonetheless diagnosed them as having chronic pain. *See* Findings for SS, ET, KP, CL, MR, SHY, and NK. Respondent offered no explanation for the inconsistency between his findings and his diagnosis with respect to any of these patients. Based on Respondent's having noted that these patients had no pain and his failure to offer any explanation for why he nonetheless diagnosed the patients as having chronic pain, I conclude that Respondent lacked a legitimate medical purpose and acted outside of the usual course of professional practice in violation of 21 CFR 1306.04(a) when he prescribed Suboxone to these patients for the purpose of treating chronic pain.

The Government further argues, and the ALJ agreed, that Respondent violated 21 CFR 1306.07(c), because his ''charts failed to show the use of any treatment options besides the prescribing of controlled substances.'' ALJ at 47. The ALJ further explained that ''[s]uch lack of attempts of alternative modalities prior to determining that the patient suffers from chronic pain violates'' this regulation. *Id.*

Both the Government and the ALJ clearly misread the regulation. This provision, which is part of the regulation setting forth the requirements for dispensing narcotic controlled substances ''to a narcotic dependant[sic] person for the purpose of maintenance or detoxification treatment'' states:

> This section is not intended to impose any limitations on a physician or authorized hospital staff to administer or dispense narcotic drugs in a hospital to maintain or detoxify a person as an incidental adjunct to medical or surgical treatment of conditions other than addiction, or to administer or dispense narcotic drugs to persons with intractable pain in which no relief or cure is possible or none had been found after reasonable efforts.

21 CFR 1306.07(c).

The Government's and the ALJ's construction of this regulation as imposing—by implication no less—an affirmative obligation for a physician to engage in alternative treatment modalities cannot be squared with the purpose of the CSA, which ''manifests no intent to regulate the practice of medicine generally,'' an authority which remains vested in the States. *Gonzales* v. *Oregon,* 546 U.S. 243, 270 (2006). Rather, in any case, whether a physician has an adequate basis for concluding that ''no relief or cure is possible'' for a patient's pain, or that alternative treatments should be tried, is a clinical judgment which must be assessed by reference to the standards of medical practice as set by the state medical boards and the profession itself. While a practitioner's failure to recommend alternative treatments may provide some evidence as to whether a prescription complies with 21 CFR 1306.04(a), the Government produced no expert testimony establishing with respect to any patient, that under the standards of medical practice,

[20] Given the conflicting evidence regarding DG, I decline to make any legal conclusions regarding Respondent's prescribing of methadone to him.

[21] While the Government introduced the Alabama Guidelines on using controlled substances to treat pain, it offered no evidence establishing that these standards apply to the treatment of substance abuse patients.

[22] While Respondent's charts included a Plan section, none of them included the ''objectives that will be used to determine treatment success.'' Ala. Admin. Code r.540–X–4-.08(2)(b).

Respondent was required to recommend alternative treatments.[23]

Other Allegations

The ALJ found that ''[t]he parties do not dispute that Respondent improperly used his 'X' prescription registration to prescribe controlled and non-controlled substances other than Suboxone or Subutex.'' ALJ at 43. The problem with the ALJ's reasoning is that an X number is not a registration at all, but only an identification number.

As the statute states: ''Upon receiving a notification under subparagraph (B) [of a practitioner's intent to prescribe narcotic drugs in schedules III through V for maintenance or detoxification treatment], the Attorney General shall assign the practitioner involved *an identification number under this paragraph for inclusion with the registration issued for the practitioner pursuant to subsection (f) of this section.''* 21 U.S.C. 823(g)(2)(D)(ii) (emphasis added). *See also* 21 CFR 1301.28(a) (''An individual practitioner may dispense or prescribe Schedule III, IV, or V narcotic controlled drugs * * * which have been approved by the Food and Drug Administration (FDA) specifically for use in maintenance or detoxification treatment without obtaining the separate registration required by § 1301.13(e). * * *''); *id.* § 1301.28(d)(1) (''If the individual practitioner has the appropriate registration under § 1301.13, then the Administrator will issue the practitioner *an identification number*. * * * '') (emphasis added).

Moreover, under DEA's regulations,

> [a]ll prescriptions for controlled substances shall be dated as of, and signed on, the day when issued and shall bear the full name and address of the patient, the drug name, strength, dosage form, quantity prescribed, directions for use and the name, address and *registration number of the practitioner. In addition, a prescription for a Schedule III, IV, or V narcotic drug approved by FDA specifically for 'detoxification treatment' or 'maintenance treatment' must include the identification number issued by the Administrator under § 1301.28(d) of this chapter* or a written notice stating that the practitioner is acting under the good faith exception of § 1301.28(e).

21 CFR 1306.05(a). *See also* 21 CFR 1301.28(d)(3) (''The individual practitioner must include the identification number on all records when dispensing and on all prescriptions when prescribing narcotic drugs under this section.'').

As found above, Respondent issued numerous controlled substance prescriptions (for both Suboxone and other drugs) on forms that listed only his X number. The Suboxone prescriptions issued in this manner violated DEA's regulation because Respondent was required to include both his X number and his practitioner's registration number on them. *See* 21 CFR 1306.05(a). Moreover, because he did not include his practitioner's registration number, the non-Suboxone controlled substance prescriptions violated this provision as well.

The ALJ also concluded that ''Respondent improperly prescribe Suboxone for substance abuse using his regular DEA registration number rather than the required X number.'' ALJ at 43. Apparently, this was because Respondent eventually started listing both numbers on his prescription blanks. However, as set forth above, DEA's regulation expressly requires that a practitioner include both his registration number and his X number when issuing a prescription for Suboxone for maintenance or detoxification treatment under the authority of 21 CFR 1301.28. *See* 21 CFR 1306.05(a).

Moreover, while a ''practitioner must include the identification number * * * on all prescriptions when prescribing narcotic drugs'' for the purpose of providing maintenance or detoxification treatment, *id.* 1301.28(d), nothing in DEA regulations prohibits a practitioner from including both his practitioner's registration number and his X identification number on his prescription blanks. Nor does any DEA regulation require that a practitioner cross-out his X number when writing a prescription for controlled substances other than Suboxone (or Subutex) on a prescription blank that includes both numbers.

The evidence also shows that Respondent violated the Immediate Suspension Order by issuing multiple prescriptions after he was served with the Order. Under 21 U.S.C. 843(a)(2), it is ''unlawful for any person knowingly or intentionally * * * to use in the course of the distribution[] or dispensing of a controlled substance, a registration number which is * * * suspended[.]''

The evidence clearly shows that Respondent was personally served with the Immediate Suspension Order on September 27, 2010, at which time he told the Investigator that ''he was not going to abide by this order and that [the DI] didn't have the authority to tell him that he couldn't prescribe any controlled substances.'' Tr. 113. True to his word, two days later, however, he issued prescriptions to CW for Adderall, to MK for Adderall and Lortab, and to DH for Lortab and Xanax. Respondent's explanation that these prescriptions were just mistakes or accidents is totally unpersuasive.

The prescriptions to MK and DH, as well as a further Adderall prescription which was issued to JB, were unlawful for the further reason that they were post-dated. As set forth above, under 21 CFR 1306.05(a), ''[a]ll prescriptions for controlled substances shall be dated as of, and signed on, the day when issued.'' Respondent admitted that on September 3, 2010, he issued CW a prescription for Adderall, a schedule II controlled substance which he dated October 3, 2010. Moreover, both Respondent's testimony and documentary evidence establish that Respondent wrote the prescription to MK and DH on September 29, while post-dating them to October 4. Accordingly, I also find that Respondent violated DEA regulations in writing these prescriptions.

I further find that Respondent lacked a legitimate medical purpose in prescribing Xanax to JC2. The evidence shows that Respondent knew that JC2 was abusing Xanax and that he had been jailed for distribution. While Respondent testified that he could not simply stop prescribing the drug to JC2 because JC2 could have seizures, and that he planned to taper JC2 off the drug, Respondent actually increased the daily dose of JC2's Xanax prescriptions. Given the inconsistency between the medical justification Respondent offered for his continuing to prescribe Xanax to JC2 and the actual prescriptions he issued, I conclude that Respondent lacked a legitimate medical purpose and acted outside the usual course of professional practice in prescribing Xanax to JC2. 21 CFR 1306.04(a).

The record thus establishes that Respondent's experience in dispensing controlled substances (factor two) and his record of compliance with applicable laws related to controlled substances (factor four) is characterized by his multiple violations of Federal law. These include his prescribing of methadone for maintenance or detoxification purposes without being registered to do so and in violation of DEA regulations prohibiting the prescribing of methadone for this

[23] The ALJ noted that ''Respondent testified, and the record contains no expert evidence to the contrary, that his treatment of his patients met the standard of care.'' ALJ at 48. While evidence as to the standard of care is admissible in criminal prosecutions under 21 U.S.C. 841(a)(1), I conclude that the Alabama Guidelines provide substantial evidence as to accepted boundaries of professional practice in prescribing controlled substances for the treatment of pain. *See* Ala. Admin. Code r. 540–X–4–.08(1)(g) (guidelines are intended ''to communicate what the Boards considers to be within the boundaries of professional practice'').

purpose; his prescribing of controlled substances to treat chronic pain without a legitimate medical purpose; his prescribing of Xanax to JC2; his issuance of prescriptions which lacked his practitioner's registration number; his issuance of post-dated prescriptions; and his issuance of multiple prescriptions after his registration had been suspended. I further conclude that the Government has made a *prima facie* showing that Respondent has committed acts which render his registration ''inconsistent with the public interest,'' 21 U.S.C. 824(a)(4), and that this conduct is sufficiently egregious to warrant the revocation of his registration.[24]

Sanction

Under Agency precedent, where, as here, the Government has made out a *prima facie* case that a registrant has committed acts which render his ''registration inconsistent with the public interest,'' he must '' 'present[] sufficient mitigating evidence to assure the Administrator that [he] can be entrusted with the responsibility carried by such a registration.' '' *Samuel S. Jackson,* 72 FR 23848, 23853 (2007) (quoting *Leo R. Miller,* 53 FR 21931, 21932 (1988)). ''Moreover, because 'past performance is the best predictor of future performance,' *ALRA Labs., Inc.* v. *DEA,* 54 F.3d 450, 452 (7th Cir. 1995), this Agency has repeatedly held that where a registrant has committed acts inconsistent with the public interest, the registrant must accept responsibility for [his] actions and demonstrate that [he] will not engage in future misconduct.'' *Medicine Shoppe-Jonesborough,* 73 FR 364 (2008). As the Sixth Circuit has recognized, this Agency also ''properly consider[s]'' a registrant's admission of fault and his candor during the investigation and hearing to be ''important factors'' in the public interest determination. *See Hoxie,* 419 F.3d at 483.

The ALJ found, and the record supports the conclusion, that Respondent eventually ceased prescribing methadone for maintenance and detoxification purposes. ALJ at 49–50. The record generally supports the conclusion that Respondent stopped writing controlled substance prescriptions which did not include his registration number, as required by DEA regulations. However, as found above, in September 2010, Respondent issued a further Adderall prescription to JB and did not include his registration number.

The ALJ further noted that Respondent expressed remorse for some of his wrongdoing. ALJ at 50. However, while Respondent maintained that he had mistakenly issued the post-suspension prescriptions, and ''would never do anything to violate an order,'' Tr. 509, his testimony is belied by the evidence that upon being served with the Immediate Suspension Order, he stated his intention not to comply with it. Indeed, his testimony is patently disingenuous, given that he wrote the prescriptions only two days after he was served with the Order. In short, Respondent's conduct manifests a deliberate and egregious disregard for his obligations as a DEA registrant.

Finally, while the ALJ noted that ''Respondent testified passionately about the prevalence of narcotic abuse in Red Bay and his want to eliminate it,'' she further concluded that he ''likely facilitated some of that abuse.'' *Id.* The ALJ's conclusion is well supported. Indeed, as found above, in numerous instances, Respondent issued controlled-substance prescriptions for the purported purpose of treating a patient's pain, even though he recorded in the patient's chart that the patient had ''NO'' pain and/or failed to make the findings required under the State's Guidelines to properly diagnose the patient. Moreover, during one of the interviews by the Investigators, Respondent admitted that he did not follow the State's Guidelines. Tr. 220. Respondent, however, offered no evidence that he now intends to comply with the Guidelines.

Accordingly, I hold that Respondent has not rebutted the Government's *prima facie* case. I will therefore order that Respondent's registration be revoked and that any pending application be denied. For the same reasons that led me to order the Immediate Suspension of Respondent's registration, I conclude that the public interest requires that this Order be effective immediately.

Order

Pursuant to the authority vested in me by 21 U.S.C. 823(f) & 824(a)(4), as well as by 28 CFR 0.100(b) & 0.104, I order that DEA Certificate of Registration, BC1701184, and Identification Number XC1701184, issued to Morris W. Cochran, M.D., be, and they hereby are, revoked. I further order that any application for renewal or modification of such registration be, and it hereby is, denied. This Order is effective immediately.

Dated: March 16, 2012.

Michele M. Leonhart,

Administrator.

[FR Doc. 2012–7107 Filed 3–23–12; 8:45 am]

BILLING CODE 4410–09–P

[24] With respect to factor five, the ALJ found that Respondent's ''lack of candor * * * threatens public health and safety.'' ALJ at 49. As support for this conclusion, the ALJ noted that most of the patients who were interviewed by the Investigators had stated that Respondent was treating them for substance abuse, yet Respondent testified that they were being treated for chronic pain but did not realize this. *Id.*

While I agree with the ALJ that Respondent lacked candor, and appreciate that she personally observed his testimony, I do so based on different evidence. First, during the initial interview on Feb. 28, 2010, Respondent told the investigators that he was operating a detox clinic and was using methadone to transfer his patients to Suboxone. Tr. 43. Yet later that day, he claimed that he was prescribing methadone only for pain and had previously misspoken. *Id.* at 54–55. Second, when confronted with evidence that several of his methadone patients had come to him from methadone clinics, he attempted to justify his unlawful prescribing of methadone to them by claiming that the patients had actually gone to these clinics to treat their pain. *See* Tr. 695–96 (testimony regarding JB); *id.* at 699 (testimony regarding JC); *id.* at 716–17 (testimony regarding KI); *id.* at 728 (testimony regarding TP). This factor thus also supports revocation.

DEPARTMENT OF JUSTICE

Office of Justice Programs

[OMB Number 1121–NEW]

Agency Information Collection Agencies: New Collection; Comments Requested

ACTION: 60-Day notice of information collection under review.

The Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, will be submitting the following information collection request for review and approval in accordance with the Paperwork Reduction Act of 1995. The proposed information collection is published to obtain comments from the public and affected agencies. Comments are encouraged and will be accepted for ''sixty days'' until May 25, 2012. This process is conducted in accordance with 5 CFR 1320.10.

If you have additional comments, especially on the estimated public burden or associated response time, suggestions, or need a copy of the proposed information collection instrument with instructions or additional information, please contact: Ron Malega, 202–353–0487, Bureau of Justice Statistics, Office of Justice Programs, Department of Justice, 810 Seventh Street NW., Washington DC 20531 or *Ronald.Malega@usdoj.gov.*

Written comments and suggestions from the public and affected agencies concerning the proposed collection of information are encouraged. Your comments should address one or more of the following four points:

• Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

• Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

• Enhance the quality, utility, and clarity of the information to be collected; and

• Minimize the burden of collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Overview of this information:

1. *Type of information collection:* New data collection, Census of Problem-Solving Courts (CPSC), 2012.

2. *The title of the form/collection:* Census of Problem-Solving Courts or CPSC 2012.

3. *The agency form number, if any, and the applicable component of the Department sponsoring the collection:* The form labels are CPSC, Bureau of Justice Statistics, Office of Justice Programs, U.S. Department of Justice.

4. *Affected public who will be asked or required to respond, as well as a brief abstract:* Problem-solving courts at all levels of government. Abstract: The Bureau of Justice Statistics (BJS) proposes to implement a Census of Problem-Solving Courts (CPSC). Problem-solving courts target defendants who have ongoing social and/or psychological conditions that underlie their repeated contact with the criminal justice system. Most of the existing information about problem-solving courts (PSC) consists of court evaluations or outcome analyses. No prior census of these courts has been conducted to date despite the substantial proliferation of such courts during the past thirty years. Hence, the CPSC will allow BJS to provide national level information on problem-solving courts and case processing statistics. The CPSC is designed to provide BJS and other interested stakeholders with the first systematic empirical information on problem-solving courts. A goal of the census is to obtain information on problem-solving court operations, staffing, administration, and to generate accurate and reliable aggregate statistics on offenders who enter problem-solving court programs. Information will be collected for the most recent 12-month period in 2012. The CPSC will collect information on the following categories:

a. Court Operations and Staffing
   i. Provide the number of problem-solving courts by type (e.g., mental health, drug, etc.),
   ii. Determine PSCs level of government operations (e.g., local, state, etc.), court jurisdiction (e.g., limited, general, other) and intake of felony, misdemeanor, or status offenses,
   iii. Court session frequency,
   iv. Number of full- and part-time staff members currently employed by PSCs.
b. Funding: Types and prevalence of PSC funding (e.g., local government budget, state budget, etc.)
c. Commonly Used Services:
   i. Count the types and prevalence of offender/victim services (e.g., anger management), counseling or treatment services (e.g., outpatient mental health treatment), and general supportive services (e.g., life skills)
d. Participant participation
   i. Participant inclusionary and exclusionary factors,
   ii. Participant point of entry (e.g. pre-plea, post-plea/pre-sentence, etc.)
   iii. Case closure: Benefits of successful participation in PSC program (e.g., case dismissal).
e. Capacity and Enrollment
   i. Design Capacity: Total number of active participants PSC can manage at any one time,
   ii. Current number of active participants.
f. Data Collection Practices:
   i. Use of automated case management systems,
   ii. Ability to share case management information with external agencies,
   iii. PSCs' ability to track participant outcomes after graduation.
g. Selected PSC Aggregate Participant information:
   i. Number of offenders admitted for participation in PSC over a 12 month period,
   ii. Number of offender participants exiting program over a 12 month period, including type of exit (e.g., successful program completion),
   iii. Percentage of participants by gender over a 12 month period,
   iv. Percentage of participants by race/ethnicity over a 12 month period.

5. *An Estimate of the Total Number of Respondents and the Amount of Time Estimated for an Average Respondent to Respond:* Estimates suggest 3,800 respondents will take part in the Census of Problem-Solving Courts 2012. Based on pilot testing and in-house review, the average (mean) burden for each completed survey is expected to be approximately 30 minutes per respondent. The estimated range of burden for respondents is expected to be between 15 minutes to 1 hour for completion. The following factors were considered when creating the burden estimate: the estimated total number of problem-solving courts, the ability of problem-solving courts to access data, and the type of data capabilities generally found in the field. BJS estimates that nearly all of the approximately 3,800 respondents will fully complete the questionnaire.

6. *An Estimate of the Total Public Burden (in hours) Associated with the collection:* The estimated public burden associated with this collection is 1,918 hours. It is estimated that respondents will take 30 minutes to complete a questionnaire. The burden hours for collecting respondent data sum to 1,900 hours (3,800 respondents × 0.5 hours = 1,900 hours). In addition to respondents' burden of completing the census questionnaire, the CPSC requires voluntary participation from State Points of Contacts (SPOCs) to develop an initial list of problem-solving court docket contact information. While SPOCs will not complete actual questionnaires, their effort is a necessary first step in identifying the universe of problem-solving courts nationwide. BJS estimates it will take, on average, 20 minutes for each SPOC to provide the requested list of problem-solving courts in their respective state. There are 54 SPOCS (including DC, Guam, Virgin Islands, and Puerto Rico). The total time burden is 18 hours (54 SPOCS × 20 minutes = 18 hours). Therefore the total estimated burden for the entire CPSC 2012 project is 1,918 hours (1,900 hours for respondents + 18 hours for SPOCS = 1,918 hours).

If additional information is required contact: Jerri Murray, Department Clearance Officer, United States Department of Justice, Justice Management Division, Policy and Planning Staff, Two Constitution Square, 145 N Street NE., Room 2E–508, Washington, DC 20530.

Jerri Murray,

Department Clearance Officer, PRA, U.S. Department of Justice.

[FR Doc. 2012–7172 Filed 3–23–12; 8:45 am]

BILLING CODE 4410–18–P

DEPARTMENT OF JUSTICE

Office of Justice Programs

[OMB Number 1121–0111]

Agency Information Collection Activities: Extension of a Currently Approved Collection; Comments Requested; National Crime Victimization Survey (NCVS)

ACTION: 60-day Notice of Information Collection Under Review.

The Department of Justice (DOJ), Office of Justice Programs, Bureau of Justice Statistics will be submitting the following information collection request to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995. The proposed information collection is published to obtain comments from the public and affected agencies. Comments are encouraged and will be accepted for ''sixty days'' until May 25, 2012. This process is conducted in accordance with 5 CFR 1320.10.

If you have comments especially on the estimated public burden or associated response time, suggestions, or need a copy of the proposed information collection instrument with instructions or additional information, please contact Lynn Langton, Statistician, Bureau of Justice Statistics, Office of Justice Programs, Department of Justice, 810 7th Street NW., Washington, DC 20531, or facsimile (202) 616–1351.

Written comments and suggestions from the public and affected agencies concerning the proposed collection of information are encouraged. Your comments should address one or more of the following four points:

—Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

—Evaluate the accuracy of the agencies estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

—Enhance the quality, utility, and clarity of the information to be collected; and

—Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Overview of this information:

(1) *Type of information collection:* Extension of a currently approved collection.

(2) *Title of the form/collection:* National Crime Victimization Survey.

(3) *Agency form number, if any, and the applicable component of the department sponsoring the collection:* NCVS.

(4) *Affected public who will be asked or required to respond, as well as a brief abstract.* Primary: Persons 12 years or older living in NCVS sampled households located throughout the United States. The National Crime Victimization Survey (NCVS) collects, analyzes, publishes, and disseminates statistics on the criminal victimization in the U.S.

(5) *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond/reply:* An estimate of the total number of respondents is 84,700. It will take the average interviewed respondent an estimated 23 minutes to respond, the average non-interviewed respondent an estimated 7 minutes to respond, the estimated average follow-up interview is 12 minutes, and the estimated average follow-up for a non-interview is 1 minute.

(6) *An estimate of the total public burden (in hours) associated with the collection:* The total respondent burden is approximately 67,657 hours.

If additional information is required contact: Jerri Murray, Department Clearance Officer, United States Department of Justice, Justice Management Division, Policy and Planning Staff, Two Constitution Square, 145 N Street NE., Room 2E–508, Washington, DC 20530.

Jerri Murray,

Department Clearance Officer, United States Department of Justice.

[FR Doc. 2012–7171 Filed 3–23–12; 8:45 am]

BILLING CODE 4410–18–P

DEPARTMENT OF LABOR

Employment and Training Administration

[TA–W–80,459]

Roseburg Forest Products, Composite Panels Division, Missoula, MT; Notice of Affirmative Determination Regarding Application for Reconsideration

By application dated February 29, 2012, a company official requested administrative reconsideration of the negative determination regarding workers' eligibility to apply for Trade Adjustment Assistance (TAA) applicable to workers and former workers of Roseburg Forest Products, Composite Panels Division, Missoula, Montana (subject facility). The Notice of Determination was issued on February 2, 2012 and published in the **Federal Register** on February 21, 2012 (77 FR 9973).

The workers engage in activities related to the production of particleboard. The initial determination was based on the findings that worker separations were not attributable to increased imports by the subject firm or its declining customers of articles like or directly competitive with particleboard or a shift/acquisition of these articles to/from a foreign country by the workers' firm.

In the request for reconsideration, the petitioner supplied additional information regarding possible import competition.

The Department of Labor has carefully reviewed the request for reconsideration and the existing record, and has determined that the Department will conduct further investigation to determine if the workers meet the eligibility requirements to apply for TAA.

Conclusion

After careful review of the application, I conclude that the claim is of sufficient weight to justify reconsideration of the U.S. Department of Labor's prior decision. The application is, therefore, granted.

Signed at Washington, DC, this 14th day of March 2012.

Del Min Amy Chen,

Certifying Officer, Office of Trade Adjustment Assistance.

[FR Doc. 2012–7159 Filed 3–23–12; 8:45 am]

BILLING CODE 4510–FN–P

DEPARTMENT OF LABOR

Employment and Training Administration

[TA–W–80,502; TA–W–80,502A]

Amended Certification Regarding Eligibility To Apply for Worker Adjustment Assistance

TA–W–80,502

Lexis Nexis, Quality & Metrics Department, Including Employees Located Throughout the United States Who Report to Miamisburg, OH

TA–W–80,502A

Lexis Nexis, Quality & Metrics Department, Including Employees Located Throughout the United States Who Report To Colorado Springs, CO

In accordance with Section 223 of the Trade Act of 1974, as amended (''Act''), (19 U.S.C. 2273), the Department of Labor issued a Certification of Eligibility to Apply for Worker Adjustment Assistance on February 3, 2012, applicable to workers of Lexis Nexis, Quality & Metrics Division, Miamisburg, Ohio. The workers are engaged in

activities related to the supply of quality and metric services. The Department's Notice was published in the **Federal Register** on February 21, 2012 (77 FR 9971).

At the request of a company official, the Department reviewed the certification for workers of the subject firm. New information shows that worker separations occurred within Lexis Nexis, Quality & Metrics Department in states other than Ohio, including but not limited to Colorado, and within the State of Ohio, including but not limited to Miamisburg.

These employees provide various activities related to the supply of quality and metric services. The acquisition of these services from Manila, Philippines contributed importantly to worker separations at these locations of the subject firm.

Based on these findings, the Department is amending this certification to include workers of Lexis Nexis, Quality & Metrics Department located throughout the United States who report to the Miamisburg, Ohio facility (TA–W–80,502) and to include workers of Lexis Nexis, Quality & Metrics Department located throughout the United States who report to the Colorado Springs, Colorado facility (TA–W–80,502A).

The intent of the Department's certification is to include all workers of the subject firm who were adversely affected by the acquisition of quality and metric services from Manila, Philippines.

The amended notice applicable to TA–W–80,502 is hereby issued as follows:

All workers of Lexis Nexis, Quality & Metrics Department, including employees throughout the United States who report to, Miamisburg, OH (TA–W–80,502) and Lexis Nexis, Quality & Metrics Department, including employees throughout the United States who report to, Colorado Springs, CO (TA–W–80,502), who became totally or partially separated from employment on or after October 6, 2010, through February 3, 2014, and all workers in the group threatened with total or partial separation from employment on the date of certification through two years from the date of certification, are eligible to apply for adjustment assistance under Chapter 2 of Title II of the Trade Act of 1974, as amended.

Signed at Washington, DC this 14th day of March, 2012.

Del Min Amy Chen,

Certifying Officer, Office of Trade Adjustment Assistance.

[FR Doc. 2012–7156 Filed 3–23–12; 8:45 am]

BILLING CODE 4510–FN–P

DEPARTMENT OF LABOR

Employment and Training Administration

[TA–W–81,260]

Cinram Distribution, LLC, a Subsidiary of Cinram International Income Fund, Including On-Site Leased Workers From Good People, Including Workers Whose Unemployment Insurance (UI) Wages Are Reported Through Real Time Staffing, Aurora, IL; Amended Certification Regarding Eligibility To Apply for Worker Adjustment Assistance

In accordance with Section 223 of the Trade Act of 1974, as amended (''Act''), 19 U.S.C. 2273, the Department of Labor issued a Certification of Eligibility to Apply for Worker Adjustment Assistance on February 3, 2012, applicable to workers of Cinram Distribution, LLC, a subsidiary of Cinram International Income Fund, including on-site leased workers from Good People, Aurora, Illinois. The workers are engaged in the supply of optical media distribution services. The notice was published in the **Federal Register** on February 21, 2012 (77 FR 9971).

At the request of Illinois State, the Department reviewed the certification for workers of the subject firm. New information shows that workers leased from Good People employed on-site at the Aurora, Illinois location of Cinram Distribution, LLC, a subsidiary of Cinram International Income Fund had their wages reported through a separate unemployment insurance (UI) tax account under the name Real Time Staffing.

Accordingly, the Department is amending this certification to properly reflect this matter.

The intent of the Department's certification is to include all workers of the subject firm who were adversely affected by increased company imports of the supply of optical media distribution.

The amended notice applicable to TA–W–81,260 is hereby issued as follows:

All workers from Cinram Distribution, LLC, a subsidiary of Cinram International Income Fund, including on-site leased workers from Good People, including workers whose unemployment insurance (UI) wages are reported through Real Time Staffing, Aurora, Illinois, who became totally or partially separated from employment on or after January 20, 2011 through February 3, 2014, and all workers in the group threatened with total or partial separation from employment on date of certification through two years from the date of certification, are eligible to apply for adjustment assistance under Chapter 2 of Title II of the Trade Act of 1074, as amended.

Signed at Washington, DC, this 14th day of March 2012.

Del Min Amy Chen,

Certifying Officer, Office of Trade Adjustment Assistance.

[FR Doc. 2012–7157 Filed 3–23–12; 8:45 am]

BILLING CODE 4510–FN–P

DEPARTMENT OF LABOR

Employment and Training Administration

[TA–W–80,487]

Stimson Lumber Company Arden Division Including On-Site Leased Workers From Securitas Security Services USA and Briteway Janitorial Colville, WA; Amended Certification Regarding Eligibility To Apply for Worker Adjustment Assistance and Alternative Trade Adjustment Assistance

In accordance with Section 223 of the Trade Act of 1974 (19 U.S.C. 2273), and Section 246 of the Trade Act of 1974 (26 U.S.C. 2813), as amended, the Department of Labor issued a Certification of Eligibility to Apply for Worker Adjustment Assistance and Alternative Trade Adjustment Assistance on January 18, 2012, applicable to workers and former workers of Stimson Lumber Company, Arden Division, Colville, Washington. The workers are engaged in activities related to the production of cedar lumber. The Department's Notice was published in the **Federal Register** on February 14, 2012 (77 FR 8283).

At the request of the State agency, the Department reviewed the certification for workers of the subject firm and the new information supplied by the State.

The Department determines that workers from Securitas Security Services USA and Briteway Janitorial were employed on-site at the Colville, Washington location of Stimson Lumber Company and were sufficiently under the control of Stimson Lumber Company to be considered leased workers.

The intent of the Department's certification is to include all workers of the subject firm adversely affected by customer imports of articles from Canada.

Based on these findings, the Department is amending this certification to include workers leased from Securitas Security Services USA and Briteway Janitorial working on-site

at the Colville, Washington location of the subject firm.

The amended notice applicable to TA–W–80,487 is hereby issued as follows:

All workers of Stimson Lumber Company, Arden Division, including on-site leased workers from Securitas Security Services USA and Briteway Janitorial, Colville, Washington, who became totally or partially separated from employment on or after September 27, 2010, through January 18, 2014, are eligible to apply for adjustment assistance under Section 223 of the Trade Act of 1974, and are also eligible to apply for alternative trade adjustment assistance under Section 246 of the Trade Act of 1974.

Signed at Washington, DC, this 14th day of March 2012.

Del Min Amy Chen,

Certifying Officer, Office of Trade Adjustment Assistance.

[FR Doc. 2012–7160 Filed 3–23–12; 8:45 am]

BILLING CODE 4510–FN–P

DEPARTMENT OF LABOR

Employment and Training Administration

Notice of Determinations Regarding Eligibility To Apply for Worker Adjustment Assistance

In accordance with Section 223 of the Trade Act of 1974, as amended (19 U.S.C. 2273) the Department of Labor herein presents summaries of determinations regarding eligibility to apply for trade adjustment assistance for workers by (TA–W) number issued during the period of *March 5, 2012 through March 9, 2012*.

In order for an affirmative determination to be made for workers of a primary firm and a certification issued regarding eligibility to apply for worker adjustment assistance, each of the group eligibility requirements of Section 222(a) of the Act must be met.

I. Under Section 222(a)(2)(A), the following must be satisfied:

(1) A significant number or proportion of the workers in such workers' firm have become totally or partially separated, or are threatened to become totally or partially separated;

(2) The sales or production, or both, of such firm have decreased absolutely; and

(3) One of the following must be satisfied:

(A) Imports of articles or services like or directly competitive with articles produced or services supplied by such firm have increased;

(B) Imports of articles like or directly competitive with articles into which one or more component parts produced by such firm are directly incorporated, have increased;

(C) Imports of articles directly incorporating one or more component parts produced outside the United States that are like or directly competitive with imports of articles incorporating one or more component parts produced by such firm have increased;

(D) Imports of articles like or directly competitive with articles which are produced directly using services supplied by such firm, have increased; and

(4) The increase in imports contributed importantly to such workers' separation or threat of separation and to the decline in the sales or production of such firm; or

II. Section 222(a)(2)(B) all of the following must be satisfied:

(1) A significant number or proportion of the workers in such workers' firm have become totally or partially separated, or are threatened to become totally or partially separated;

(2) One of the following must be satisfied:

(A) There has been a shift by the workers' firm to a foreign country in the production of articles or supply of services like or directly competitive with those produced/supplied by the workers' firm;

(B) There has been an acquisition from a foreign country by the workers' firm of articles/services that are like or directly competitive with those produced/supplied by the workers' firm; and

(3) The shift/acquisition contributed importantly to the workers' separation or threat of separation.

In order for an affirmative determination to be made for adversely affected workers in public agencies and a certification issued regarding eligibility to apply for worker adjustment assistance, each of the group eligibility requirements of Section 222(b) of the Act must be met.

(1) A significant number or proportion of the workers in the public agency have become totally or partially separated, or are threatened to become totally or partially separated;

(2) The public agency has acquired from a foreign country services like or directly competitive with services which are supplied by such agency; and

(3) The acquisition of services contributed importantly to such workers' separation or threat of separation.

In order for an affirmative determination to be made for adversely affected secondary workers of a firm and a certification issued regarding eligibility to apply for worker adjustment assistance, each of the group eligibility requirements of Section 222(c) of the Act must be met.

(1) A significant number or proportion of the workers in the workers' firm have become totally or partially separated, or are threatened to become totally or partially separated;

(2) The workers' firm is a Supplier or Downstream Producer to a firm that employed a group of workers who received a certification of eligibility under Section 222(a) of the Act, and such supply or production is related to the article or service that was the basis for such certification; and

(3) Either—

(A) The workers' firm is a supplier and the component parts it supplied to the firm described in paragraph (2) accounted for at least 20 percent of the production or sales of the workers' firm; or

(B) A loss of business by the workers' firm with the firm described in paragraph (2) contributed importantly to the workers' separation or threat of separation.

In order for an affirmative determination to be made for adversely affected workers in firms identified by the International Trade Commission and a certification issued regarding eligibility to apply for worker adjustment assistance, each of the group eligibility requirements of Section 222(f) of the Act must be met.

(1) The workers' firm is publicly identified by name by the International Trade Commission as a member of a domestic industry in an investigation resulting in—

(A) An affirmative determination of serious injury or threat thereof under section 202(b)(1);

(B) An affirmative determination of market disruption or threat thereof under section 421(b)(1); or

(C) An affirmative final determination of material injury or threat thereof under section 705(b)(1)(A) or 735(b)(1)(A) of the Tariff Act of 1930 (19 U.S.C. 1671d(b)(1)(A) and 1673d(b)(1)(A));

(2) The petition is filed during the 1-year period beginning on the date on which—

(A) A summary of the report submitted to the President by the International Trade Commission under section 202(f)(1) with respect to the affirmative determination described in paragraph (1)(A) is published in the **Federal Register** under section 202(f)(3); or

(B) Notice of an affirmative determination described in subparagraph (1) is published in the **Federal Register**; and

(3) The workers have become totally or partially separated from the workers' firm within—

(A) The 1-year period described in paragraph (2); or

(B) Notwithstanding section 223(b)(1), the 1- year period preceding the 1-year period described in paragraph (2).

Affirmative Determinations for Worker Adjustment Assistance

The following certifications have been issued. The date following the company name and location of each determination references the impact date for all workers of such determination.

The following certifications have been issued. The requirements of Section 222(a)(2)(A) (increased imports) of the Trade Act have been met.

TA–W No.	Subject firm	Location	Impact date
81,051	Parkdale America, LLC, Plant #24, Serve Source/Defender Services	Rabun Gap, GA.	February 13, 2010
81,162	Kennametal, Inc., JSCL Division	Greenfield, MA	April 1, 2011.
81,324	CSB Fashion Inc	New York, NY	February 10, 2011.
81,337	Fu Sing Fashion, Inc	Brooklyn, NY	February 12, 2011.
81,374	Emhart Teknologies, Emhart-Parker Kalon Plant, A Stanley Black & Decker Company.	Campbellsville, KY	February 27, 2011.

The following certifications have been issued. The requirements of Section 222(a)(2)(B) (shift in production or services) of the Trade Act have been met.

TA–W No.	Subject firm	Location	Impact date
81,234	Onyx Enterprises International Corporation	Cranbury, NJ	February 13, 2010.
81,252	Littelfuse, Inc., Corporate Resource, Aerotek	Chicago, IL	September 22, 2011.
81,252A	Dysis and Tek, Working on-site at Littelfuse, Inc.	Chicago, IL	February 13, 2010.
81,306	Allstate Insurance Company, Customer Enterprise Services, Claims Services Department.	Irving, TX	February 6, 2011.
81,308	Maxim Integrated Products, Inc., Worldwide Test Engineering Unit	Hillsboro, OR	February 6, 2011.
81,316	Finisar Corporation, Workforce Logic	Wilmington, MA	January 30, 2011.
81,320	Bose Corporation, Manufacturing Division, Randstad, Aerotek & Resource Mfg.	Blythewood, SC	February 1, 2011.
81,330	TE Connectivity/Tyco Electronics, CIS–Datacomm Division, Kelly Services	Wilsonville, OR	February 10, 2011.
81,331	PerkinElmer Health Sciences, Inc., PerkinElmer, Inc., Manufacturing Division, Monroe Staffing and Adecco.	Shelton, CT	February 14, 2011.
81,336	Bureau Veritas, Consumer Product Services, Inc., Superior Group-Global Headquarters.	Taunton, MA	February 14, 2011.

The following certifications have been issued. The requirements of Section 222(c) (supplier to a firm whose workers are certified eligible to apply for TAA) of the Trade Act have been met.

TA–W No.	Subject firm	Location	Impact date
81,299	Kohler Co., Malvern Division, Manpower Staffing	Malvern, AR	February 6, 2011.

Negative Determinations for Worker Adjustment Assistance

In the following cases, the investigation revealed that the eligibility criteria for worker adjustment assistance have not been met for the reasons specified.

The investigation revealed that the criterion under paragraph (a)(1), or (b)(1), or (c)(1)(employment decline or threat of separation) of section 222 has not been met.

TA–W No.	Subject firm	Location	Impact date
81,094	Mphasis Corporation, Mphasis Corporation	New York, NY.	

The investigation revealed that the criteria under paragraphs (a)(2)(A) (increased imports) and (a)(2)(B) (shift in production or services to a foreign country) of section 222 have not been met.

TA–W No.	Subject firm	Location	Impact date
80,464	Brunswick Bowling & Billiards (Corp), Billiards Division, Brunswick Corporation.	Lake Forest, IL.	
80,524	Omtron USA LLC d/b/a Townsends, Omtron LTD, Mocksville Division, wages reported under Crestwood Farms LLC.	Mocksville, NC.	

TA–W No.	Subject firm	Location	Impact date
81,106	International Business Machines, Optim Data & Warehousing Tools Organization.	San Francisco, CA.	
81,133	Grifols Therapeutics, Inc., Formerly Known as Talecris Biotherapeutics, Inc.	Research Triangle Park, NC.	
81,282	International Paper Company, Container The Americas Div., Manpower	El Paso, TX.	
81,287	American Woodmark Corporation	Moorefield, WV.	
81,305	Zurn Industries, LLC, Rexnord Industries, Adecco and Express Personnel	Falconer, NY.	
81,332	American Apparel, Inc.	Fort Deposit, AL.	

Determinations Terminating Investigations of Petitions for Worker Adjustment Assistance

After notice of the petitions was published in the **Federal Register** and on the Department's Web site, as required by Section 221 of the Act (19 U.S.C. 2271), the Department initiated investigations of these petitions.

The following determinations terminating investigations were issued because the petitioner has requested that the petition be withdrawn.

TA–W No.	Subject firm	Location	Impact date
81,044	FabSol, LLC, Staff Partners	Cadiz, KY.	
81,161	Emlinq LLC	Simi Valley, CA.	
81,256	Verizon Business Networks, Inc	Ashburn, VA.	
81,326	European Touch	Milwaukee, WI.	
81,388	Header Products, Inc	Romulus, MI.	

I hereby certify that the aforementioned determinations were issued during the period of *March 5, 2012 through March 9, 2012.* These determinations are available on the Department's Web site tradeact/taa/taa search form.cfm under the searchable listing of determinations or by calling of Office of Trade Adjustment Assistance toll-free at 888–365–6822.

Dated: March 16, 2012.

Michael. W. Jaffe,

Certifying Officer, Office of Trade Adjustment Assistance.

[FR Doc. 2012–7158 Filed 3–23–12; 8:45 am]

BILLING CODE 4510–FN–P

DEPARTMENT OF LABOR

Employment and Training Administration

Investigations Regarding Certifications of Eligibility To Apply for Worker Adjustment Assistance

Petitions have been filed with the Secretary of Labor under Section 221(a) of the Trade Act of 1974 (''the Act'') and are identified in the Appendix to this notice. Upon receipt of these petitions, the Director of the Division of Trade Adjustment Assistance, Employment and Training Administration, has instituted investigations pursuant to Section 221(a) of the Act.

The purpose of each of the investigations is to determine whether the workers are eligible to apply for adjustment assistance under Title II, Chapter 2, of the Act. The investigations will further relate, as appropriate, to the determination of the date on which total or partial separations began or threatened to begin and the subdivision of the firm involved.

The petitioners or any other persons showing a substantial interest in the subject matter of the investigations may request a public hearing, provided such request is filed in writing with the Director, Office of Trade Adjustment Assistance, at the address shown below, not later than April 5, 2012.

Interested persons are invited to submit written comments regarding the subject matter of the investigations to the Director, Office of Trade Adjustment Assistance, at the address shown below, not later than April 5, 2012.

The petitions filed in this case are available for inspection at the Office of the Director, Office of Trade Adjustment Assistance, Employment and Training Administration, U.S. Department of Labor, Room N–5428, 200 Constitution Avenue NW., Washington, DC 20210.

Signed at Washington, DC, this 15th day of March 2012.

Michael Jaffe,

Certifying Officer, Office of Trade Adjustment Assistance.

APPENDIX

[19 TAA petitions instituted between 3/5/12 and 3/9/12]

TA–W	Subject firm (petitioners)	Location	Date of institution	Date of petition
81388	Header Products, Inc. (State/One-Stop)	Romulus, MI	03/05/12	02/01/12
81389	Howard Distributing II, Inc. (Company)	Mayfield, KY	03/05/12	03/04/12
81390	JDS Uniphase Corporation (State/One-Stop)	Ft. Collins, CO	03/05/12	03/02/12
81391	Shape Corporation (Company)	Grand Haven, MI	03/05/12	03/02/12
81392	Digital Solutions LLC. (Workers)	Altoona, PA	03/06/12	03/05/12
81393	Commercial Vehicle Group Inc. (Company)	Statesville, NC	03/06/12	03/01/12
81394	Unifi, Inc. (Company)	Ft. Payne, AL	03/06/12	03/02/12
81395	Sykes Enterprises Inc., Sprint Nextel Support Account (State/One-Stop).	Spokane Valley, WA	03/06/12	03/02/12
81396	Zondervan, a division of Harper Collins (Company)	Grand Rapids, MI	03/06/12	03/06/12

APPENDIX—Continued

[19 TAA petitions instituted between 3/5/12 and 3/9/12]

TA–W	Subject firm (petitioners)	Location	Date of institution	Date of petition
81397	Blue Scope Buildings (HCI Steel Division) (State/One-Stop).	Arlington, WA	03/06/12	03/05/12
81398	Pratt & Whitney (State/One-Stop)	East Hartford, CT	03/06/12	03/05/12
81399	Gerber Scientific, Inc., Information Technology Department (Company).	Tolland, CT	03/06/12	03/05/12
81400	North American Communications, Inc. (Company)	Duncansville, PA	03/06/12	02/24/12
81401	J.P. Morgan Clearing Corp (State/One-Stop)	Brooklyn, NY	03/07/12	03/06/12
81402	Conesys (Company)	Torrance, CA	03/08/12	02/20/12
81403	Huitt Mills, Inc. (Company)	North Wilkesboro, NC	03/08/12	03/07/12
81404	Jones Distribution Corporation (Company)	Lawrenceburg, TN	03/09/12	03/08/12
81405	Lumber Products Millwork & Components Division (Company).	Tualatin, OR	03/09/12	02/27/12
81406	PCCW Teleservices (U.S.), Inc. (Workers)	Tiffin, OH	03/09/12	03/08/12

[FR Doc. 2012–7167 Filed 3–23–12; 8:45 am]

BILLING CODE 4510–FN–P

LEGAL SERVICES CORPORATION

Request for Comments—Financial Eligibility Screening and Online Intake

AGENCY: Legal Services Corporation.

ACTION: Notice; request for comments.

SUMMARY: The Legal Services Corporation seeks public comment on a draft program letter discussing minimum screening requirements for LSC recipients to apply when determining financial eligibility of applicants based on information collected through online systems.

DATES: Written comments will be accepted until April 25, 2012.

ADDRESSES: Written comments may be submitted by mail, fax or email to Mark Freedman, Senior Assistant General Counsel, Legal Services Corporation, 3333 K St. NW., Washington, DC 20007; 202–295–1623 (phone); 202–337–6519 (fax); *mfreedman@lsc.gov.*

FOR FURTHER INFORMATION CONTACT: Mark Freedman, Senior Assistant General Counsel, Legal Services Corporation, 3333 K St. NW., Washington, DC 20007; 202–295–1623 (phone); 202–337–6519 (fax); *mfreedman@lsc.gov.*

SUPPLEMENTARY INFORMATION: The Legal Services Corporation (''LSC'' or ''Corporation'') was established by the United States Congress ''for the purpose of providing financial support for legal assistance in noncriminal matters or proceedings to persons financially unable to afford such assistance.'' 42 U.S.C. 2996b(a). LSC performs this function primarily through providing federal funding to civil legal aid programs providing legal services to low-income persons throughout the United States and its possessions and territories in geographic areas determined by LSC. Each LSC recipient must screen all applicants for LSC funded legal assistance to determine if they meet the recipient's financial eligibility requirements, which themselves must comply with the LSC financial eligibility requirements set forth at 45 CFR part 1611.

Over the last several years, LSC has seen a marked increase in the number of LSC grant recipients implementing online systems as part of their client-eligibility screening systems to improve efficiency in their intake processes. LSC has received a corresponding increase in compliance-related inquiries pertaining to these systems. LSC has prepared this draft program letter to assist LSC recipients in complying with eligibility screening requirements for all methods of intake, including online intake systems. It reflects LSC's obligation to ensure compliance with statutory and regulatory requirements governing the use of LSC funds, as well as LSC's recognition of the realities of practices in the field.

The draft program letter can be found in the ''Matters for Comment'' section of LSC's Web site at: *http://www.lsc.gov/about/matters-comment.*

LSC recognizes the importance of input from the public and from LSC recipients. It is LSC's intention that the Program Letter balance recognition of the advancements in technology with LSC's obligation to ensure compliance with the statutory and regulatory requirements governing the use of LSC funds. LSC encourages all interested parties and program staff whose work involves screening applicants to review the draft Program Letter and provide input to LSC. Interested parties may submit comments to LSC within thirty (30) days of the date of publication of this notice.

Dated: March 20, 2012.

Victor M. Fortuno,

Vice President & General Counsel.

[FR Doc. 2012–7117 Filed 3–23–12; 8:45 am]

BILLING CODE 7050–01–P

NUCLEAR REGULATORY COMMISSION

Notice of Charter Renewal: Advisory Committee on the Medical Uses of Isotopes

AGENCY: U.S. Nuclear Regulatory Commission.

ACTION: This notice is to announce the renewal of the Advisory Committee on the Medical Uses of Isotopes (ACMUI) for a period of two years.

SUPPLEMENTARY INFORMATION: The U.S. Nuclear Regulatory Commission (NRC) has determined that the renewal of the Charter for the Advisory Committee on the Medical Uses of Isotopes for the two year period commencing on March 14, 2012 is in the public interest, in connection with duties imposed on the Commission by law. This action is being taken in accordance with the Federal Advisory Committee Act, after consultation with the Committee Management Secretariat, General Services Administration.

The purpose of the ACMUI is to provide advice to NRC on policy and technical issues that arise in regulating the medical use of byproduct material for diagnosis and therapy. Responsibilities include providing guidance and comments on current and proposed NRC regulations and regulatory guidance concerning medical use; evaluating certain non-routine uses of byproduct material for medical use;

and evaluating training and experience of proposed authorized users. The members are involved in preliminary discussions of major issues in determining the need for changes in NRC policy and regulation to ensure the continued safe use of byproduct material. Each member provides technical assistance in his/her specific area(s) of expertise, particularly with respect to emerging technologies. Members also provide guidance as to NRC's role in relation to the responsibilities of other Federal agencies as well as of various professional organizations and boards.

Members of this Committee have demonstrated professional qualifications and expertise in both scientific and non-scientific disciplines including nuclear medicine; nuclear cardiology; radiation therapy; medical physics; nuclear pharmacy; State medical regulation; patient's rights and care; health care administration; and Food and Drug Administration regulation.

FOR FURTHER INFORMATION CONTACT: Ashley Cockerham, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555; Telephone (240) 888–7129; email *Ashley.Cockerham@nrc.gov.*

Dated: March 19, 2012.

Andrew L. Bates,

Federal Advisory Committee Management Officer.

[FR Doc. 2012–7184 Filed 3–23–12; 8:45 am]

BILLING CODE 7590–01–P

SECURITIES AND EXCHANGE COMMISSION

Proposed Collection; Comment Request

Upon Written Request, Copies Available From: Securities and Exchange Commission, Office of Investor Education and Advocacy, Washington, DC 20549–0213.

Extension:

Rule 23c–1, SEC File No. 270–253, OMB Control No. 3235–0260.

Notice is hereby given that, pursuant to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520), the Securities and Exchange Commission (the ''Commission'') is soliciting comments on the collection of information summarized below. The Commission plans to submit this existing collection of information to the Office of Management and Budget for extension and approval.

Rule 23c–1 (17 CFR 270.23c–1) under the Investment Company Act of 1940 (15 U.S.C. 80a), among other things, permits a closed-end fund to repurchase its securities for cash if in addition to the other requirements set forth in the rule: (i) Payment of the purchase price is accompanied or preceded by a written confirmation of the purchase; (ii) the asset coverage per unit of the security to be purchased is disclosed to the seller or his agent; and (iii) if the security is a stock, the fund has, within the preceding six months, informed stockholders of its intention to purchase stock. Commission staff estimates that approximately 29 closed-end funds rely on Rule 23c–1 annually to undertake 261 repurchases of their securities. Commission staff estimates that, on average, a fund spends 2.5 hours to comply with the paperwork requirements listed above each time it undertakes a security repurchase under the rule. Commission staff thus estimates the total annual burden of the rule's paperwork requirements is 653 hours.

In addition, the fund must file with the Commission a copy of any written solicitation to purchase securities given by or on behalf of the fund to 10 or more persons. The copy must be filed as an exhibit to Form N–CSR (17 CFR 249.331 and 274.128). The burden associated with filing Form N–CSR is addressed in the submission related to that form.

The estimate of average burden hours is made solely for the purposes of the Paperwork Reduction Act, and is not derived from a comprehensive or even a representative survey or study of the costs of Commission rules and forms.

Written comments are invited on: (a) Whether the collection of information is necessary for the proper performance of the functions of the Commission, including whether the information has practical utility; (b) the accuracy of the Commission's estimate of the burden of the collection of information; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology. Consideration will be given to comments and suggestions submitted in writing within 60 days of this publication.

Please direct your written comments to Thomas Bayer, Director/Chief Information Officer, Securities and Exchange Commission, c/o Remi Pavlik-Simon, 6432 General Green Way, Alexandria, VA 22312; or send an email to: *PRA_Mailbox@sec.gov.*

Dated: March 20, 2012.

Kevin M. O'Neill,

Deputy Secretary.

[FR Doc. 2012–7135 Filed 3–23–12; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–66624]

Order Granting an Application of Edward Jones & Co. LLP Exemption From Exchange Act Section 11(d)(1) Pursuant to Exchange Act Section 36(a)

March 20, 2012.

By letter dated December 5, 2011, counsel for Edward Jones & Co., L.P. (''Edward Jones'') requested that the Securities and Exchange Commission (''Commission'') issue to Edward Jones an exemption from Section 11(d)(1) of the Securities Exchange Act of 1934 (''Exchange Act'') pursuant to Section 36(a) of the Exchange Act. Specifically, the letter requested that the Commission exempt Edward Jones from the prohibitions of Section 11(d)(1) of the Exchange Act if Edward Jones extends to a customer margin on newly-purchased shares of mutual funds not managed or sponsored by Edward Jones or any affiliate of Edward Jones (''non-proprietary mutual funds'') in instances in which the customer makes a dollar-for-dollar substitution by selling an already-margined non-proprietary mutual fund and buying another non-proprietary mutual fund on margin without incurring any fees, commissions or other costs for the transactions and without Edward Jones otherwise charging the respective customers any fees, commissions or other costs to effect the transactions.

We find that it is appropriate and in the public interest and consistent with the protection of investors to grant Edward Jones a conditional exemption from Section 11(d)(1) of the Exchange Act.

Conclusion

It is hereby ordered, pursuant to Section 36(a) of the Exchange Act, that Edward Jones, based on the representations and the facts presented in its letter and subject to the conditions contained in this order, is exempt from the new issue lending restriction of Section 11(d)(1) of the Exchange Act to the extent that Edward Jones extends to a customer margin on newly-purchased shares of non-proprietary mutual funds in instances in which the customer makes a dollar-for-dollar substitution by selling an already-margined non-

proprietary mutual fund and buying another non-proprietary mutual fund on margin without incurring any fees, commissions or other costs for the transactions and without Edward Jones otherwise charging the respective customers any fees, commissions or other costs to effect the transactions.

This exemption is subject to the conditions that

• Edward Jones does not receive any sales commissions, Rule 12b–1 fees, revenue sharing or any other compensation, directly or indirectly, from the mutual fund complexes in which investments are made, and Edward Jones does not charge or receive any compensation, fees, expenses or other costs as a result of its effecting transactions in the funds; and

• Edward Jones, its affiliates, associates, related persons, management and employees have no affiliation with the mutual funds subject to the request, other than that Edward Jones will effect transactions in the funds for its customers.

The foregoing exemption is subject to modification or revocation if at any time the Commission determines that such action is necessary or appropriate in furtherance of the purposes of the Exchange Act.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[1]

Kevin M. O'Neill,

Deputy Secretary.

[FR Doc. 2012–7176 Filed 3–23–12; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–66623; File No. SR–ISE–2012–23]

Self-Regulatory Organizations; International Securities Exchange, LLC; Notice of Filing and Immediate Effectiveness of Proposed Rule Change Regarding the Short Term Option Series Program

March 20, 2012.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act'')[1] and Rule 19b–4 thereunder,[2] notice is hereby given that, on March 13, 2012, the International Securities Exchange, LLC (''Exchange'' or ''ISE'') filed with the Securities and Exchange Commission (''Commission'') the proposed rule change as described in Items I and II below, which Items have been prepared by the Exchange. The Exchange filed the proposal as a ''non-controversial'' proposed rule change pursuant to Section 19(b)(3)(A)(iii) of the Act[3] and Rule 19b–4(f)(6) thereunder.[4] The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange proposes to amend its rules regarding the Short Term Option Series Program. The text of the proposed rule change is available on the Exchange's Web site *www.ise.com,* at the principal office of the Exchange, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of, and basis for, the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The self-regulatory organization has prepared summaries, set forth in Sections A, B and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The purpose of this proposed rule change is to amend ISE Rules 504 and 2009 regarding the Short Term Option Series Program (''STOS Program'').[5] Specifically, the Exchange proposes to amend its rules to allow the Exchange to open short term option series that are opened by other securities exchanges in option classes selected by other exchanges under their respective short term option rules.

Currently, ISE may select up to 30 currently listed option classes on which short term option series may be opened in the STOS Program. The Exchange may also match any option classes that are selected by other securities exchanges that employ a similar program under their respective rules. For each option class eligible for participation in the STOS Program, the Exchange may open up to 30 short term option series for each expiration date in that class.

This proposal seeks to allow the Exchange to open short term option series that are opened by other securities exchanges in option classes selected by other exchanges under their respective short term option rules. This change is being proposed notwithstanding the current cap of 30 series per class under the STOS Program. This is a competitive filing and is based on approved filings and existing rules of The NASDAQ Stock Market LLC for the NASDAQ Options Market (''NOM'') and NASDAQ OMX PHLX, Inc. (''PHLX'').[6]

ISE is competitively disadvantaged since it operates a substantially similar STOS Program as NOM and PHLX but is limited to listing a maximum of 30 series per options class that participates in its STOS Program (whereas PHLX and NOM are not similarly restricted).

The Exchange is not proposing any changes to the STOS Program other than the ability to open short term option series that are opened by other securities exchanges in option classes selected by other exchanges under their respective short term option rules.

ISE notes that the STOS Program has been well-received by market participants, in particular by retail investors. ISE believes that the current proposed revision to the STOS Program will permit the Exchange to meet increased customer demand and provide market participants with the ability to hedge in a greater number of option classes and series.

With regard to the impact of this proposal on system capacity, ISE has analyzed its capacity and represents that it and the Options Price Reporting Authority (''OPRA'') have the necessary systems capacity to handle the potential additional traffic associated with trading of an expanded number of series for the classes that participate in the STOS Program.

The proposed increase to the number of series per classes eligible to participate in the STOS Program is required for competitive purposes as well as to ensure consistency and uniformity among the competing

[1] 17 CFR 200.30–3(62).

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] 15 U.S.C. 78s(b)(3)(A)(iii).

[4] 17 CFR 240.19b–4(f)(6).

[5] The Exchange adopted the STOS Program on a pilot basis in 2005. *See* Securities Exchange Act Release No. 52012 (July 12, 2005), 70 FR 41246 (July 18, 2005) (SR–ISE–2005–17). The STOS Program was approved on a permanent basis in 2010. *See* Securities Exchange Act Release No. 62444 (July 2, 2010), 75 FR 39595 (July 9, 2010) (SR–ISE–2010–72).

[6] *See* Securities Exchange Act Release Nos. 65775 (November 17, 2011), 76 FR 72473 (November 23, 2011) (SR–NASDAQ–2011–138) and 65776 (November 17, 2011), 76 FR 72482 (November 23, 2011) (SR–PHLX–2011–131).

options exchanges that have adopted similar STOS Programs.

2. Statutory Basis

The Exchange believes that the proposed rule change is consistent with Section 6(b) of the Securities Exchange Act of 1934 [7] (the ''Act'') in general, and furthers the objectives of Section 6(b)(5) of the Act [8] in particular, in that it is designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general to protect investors and the public interest. The Exchange believes that expanding the current short term options program will result in a continuing benefit to investors by giving them more flexibility to closely tailor their investment decisions and hedging decisions in greater number of securities. The Exchange believes that expanding the current program will provide the investing public and other market participants with additional opportunities to hedge their investment thus allowing these investors to better manage their risk exposure. While the expansion of the STOS Program will generate additional quote traffic, the Exchange does not believe that this increased traffic will become unmanageable since the proposal remains limited to a fixed number of classes.

B. Self-Regulatory Organization's Statement on Burden on Competition

ISE does not believe that this proposed rule change will impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Exchange Act. In this regard and as indicated above, the Exchange notes that the rule change is being proposed as a competitive response to existing NOM and PHLX rules. ISE believes this proposed rule change is necessary to permit fair competition among the options exchanges with respect to their short term options programs.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

The Exchange has not solicited, and does not intend to solicit, comments on this proposed rule change. The Exchange has not received any unsolicited written comments from members or other interested parties.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Because the foregoing proposed rule change does not significantly affect the protection of investors or the public interest, does not impose any significant burden on competition, and, by its terms, does not become operative for 30 days from the date on which it was filed, or such shorter time as the Commission may designate, it has become effective pursuant to Section 19(b)(3)(A) of the Act [9] and Rule 19b–4(f)(6) thereunder.[10]

The Exchange has requested that the Commission waive the 30-day operative delay. The Commission believes that waiver of the operative delay is consistent with the protection of investors and the public interest because the proposal is substantially similar to those of other exchanges that have been approved by the Commission and permit such exchanges to open short term option series that are opened by other securities exchanges under their respective short term option rules.[11] Therefore, the Commission designates the proposal operative upon filing.[12]

At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR–ISE–2012–23 on the subject line.

Paper Comments

- Send paper comments in triplicate to Elizabeth M. Murphy, Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–ISE–2012–23. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street, NE., Washington, DC 20549, on official business days between the hours of 10 a.m. and 3 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–ISE–2012–23 and should be submitted on or before April 16, 2012.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[13]

Kevin M. O'Neill,

Deputy Secretary.

[FR Doc. 2012–7202 Filed 3–23–12; 8:45 am]

BILLING CODE 8011–01–P

[7] 15 U.S.C. 78f(b).

[8] 15 U.S.C. 78f(b)(5).

[9] 15 U.S.C. 78s(b)(3)(A).

[10] 17 CFR 240.19b–4(f)(6). In addition, Rule 19b–4(f)(6)(iii) requires the Exchange to give the Commission written notice of the Exchange's intent to file the proposed rule change, along with a brief description and text of the proposed rule change, at least five business days prior to the date of filing of the proposed rule change, or such shorter time as designated by the Commission. The Exchange has satisfied this requirement.

[11] *See supra* note 6.

[12] For purposes only of waiving the 30-day operative delay, the Commission has considered the proposed rule's impact on efficiency, competition, and capital formation. *See* 15 U.S.C. 78c(f).

[13] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–66628; File No. SR–ICEEU–2012–01]

Self-Regulatory Organizations; ICE Clear Europe Limited; Order Approving Proposed Rule Change To Revise Rules and Procedures Related to Certain Technical and Operational Changes Relating to Credit Default Swap Contracts

March 20, 2012.

I. Introduction

On January 24, 2012, ICE Clear Europe Limited (''ICE Clear Europe'') filed with the Securities and Exchange Commission (''Commission'') the proposed rule change SR–ICEEU–2012–01 pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act'')[1] and Rule 19b–4 thereunder.[2] The proposed rule change was published for comment in the **Federal Register** on February 13, 2012.[3] The Commission received no comment letters regarding the proposal. For the reasons discussed below, the Commission is granting approval of the proposed rule change.

II. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The proposed changes were set out in revisions to the Rules and CDS Procedures that were described in circular no. C11/170 published on November 25, 2011 (available on the Internet Web site of ICE Clear Europe at: *https://www.theice.com/publicdocs/clear_europe/circulars/C11170_att1.pdf* and *https://www.theice.com/publicdocs/clear_europe/circulars/C11170_att2.pdf*). According to ICE Clear Europe, the purpose of these rule changes is to allow the clearing agency to make certain technical operational changes relating to CDS Contracts (as defined at ICE Clear Europe Rule 101), including those that arise under its rules on an occasional basis as part of the end-of-day price submission process by Clearing Members.

Specifically, these changes can be grouped into three categories:

First, under ICE Clear Europe's current rule framework, CDS Contracts that arise following the end-of-day pricing process give rise to non-cleared transactions that may later be submitted for clearing. However, since the applicable CDS Contract is typically intended to be cleared between the parties, and since trades that arise following end-of-day pricing arise at the direction of the clearing house, ICE Clear Europe believes that it is more efficient and reduces risk for such CDS Contract to arise upon notice by ICE Clear Europe, rather than to require the applicable parties to submit the CDS Contract later. Accordingly, the first change establishes Rule 401(a)(xi) to permit ICE Clear Europe to specify the time and terms of entry into a CDS Contract arising following the submission of end-of-day prices by a Clearing Member. Once ICE Clear Europe has notified the two affected clearing members of a contract under Rule 401(a)(xi), the contract will stand, unless it is voidable under Rule 404 (for example due to illegality or manifest error). This change gives rise to the majority of the proposed rule changes in the text of the ICE Clear Europe Rules and the CDS Procedures. As a practical matter, this change operationalizes a technical service by which the terms of a CDS Contract entered into following submission of end-of-day prices can be promptly cleared by ICE Clear Europe. In order to operationalize this change, certain conforming changes are required. For example, various Rules establishing procedures for other automatically effective CDS Contracts are amended to include new Rule 401(a)(xi).

In addition, a new paragraph (c) has been added to Rule 602 which deems Clearing Members not to be in violation of Position Limits (as defined in the Rules) as a result of CDS Contracts that arise by notice of ICE Clear Europe. Rule 602(c) provides a procedure under which the Clearing Member can close out such a position within five business days of the applicable Position Limit adoption or determination date. In this manner, both the policy of ensuring the pricing process through automatically effective trades and the policy of ensuring Position Limits are respected. ICE Clear Europe notes that these provisions relating to accommodation of Clearing Members in respect of Position Limits that may be applicable to CDS Contracts that are automatically effective applies not only to Rule 401(a)(xi), but also to Rules 401(a)(v), (vi), and (x). In the case of Rule 401(a)(v), new Rule 602(c) would apply to CDS Contracts that arise from transactions generated by ICE Futures Europe or the ICE OTC Operator as a result of the operation of their contra trade, error trade, invalid trade, cancelled trade, error correction or similar policies and rules and procedures relating thereto or otherwise. In the case of Rule 401(a)(vi), new Rule 602(c) would apply to CDS Contracts that form as a result of another Contract being invoiced back by ICE Clear Europe. Finally, in the case of Rule 401(a)(x), new Rule 602(c) would apply to CDS Contracts arising pursuant to Rule 903(a)(xii), which generally governs the creation of new CDS Contracts between ICE Clear Europe and non-defaulting Clearing Members to replace any remaining CDS Contracts of a defaulting Clearing Member.

Under the second category of changes, settlement and coupon payments under CDS Contracts will take place through the ICE Clear Europe's payment banking network used for other cleared products, and not through the CLS Bank International (''CLS'') system. At present, Section 8.9 of the CDS Procedures provides that where a CDS Contract is to be settled in circumstances in which Rule 1514 (CDS Alternative Delivery or Settlement Procedure) does not apply, relevant cash payments between ICE Clear Europe and CDS Clearing Members will take place through The Depository Trust and Clearing Corporation using CLS, unless otherwise specified by ICE Clear Europe in a circular prior to the date on which such cash payments are due. However, following consultation with Clearing Members, ICE Clear Europe has determined it is more efficient if settlement and coupon payments are effected through ICE Clear Europe's current payment system (which is also permitted by the current CDS Procedures). ICE Clear Europe has determined to harmonize the system described at Section 8.9 of the CDS Procedures into a single payment system. This is achieved through the deletion of Section 8.9 of the CDS Procedures.[4] It should be noted that this proposed change also serves to further harmonize the ICE Clear Europe Rules and CDS Procedures with those of ICE Clear Credit LLC, the U.S.-based

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] Securities Exchange Act Release No. 34–66341 (January 24, 2012), 77 FR 7652 (February 13, 2012). In its filing with the Commission, ICE Clear Europe included statements concerning the purpose of and basis for the proposed rule change. The text of these statements is incorporated into the discussion of the proposed rule change in Section II below.

[4] On January 12, 2012, ICE Clear Europe published circular no. C12/003 (available at: *https://www.theice.com/publicdocs/clear_europe/circulars/C12003.pdf*), pursuant to which ICE Clear Europe used its authority under Rule 8.9 of the CDS Procedures to specify that, effective January 17, 2012, all payments that had been settled via CLS including Upfront Fees, Quarterly Coupon Payments and Cash Credit Event Settlements would subsequently be settled in accordance with standard process set out in the Finance Procedures.

clearing agency affiliate of ICE Clear Europe.

The third category of changes involves various cross-reference and typographical amendments to the processes for submission of CDS Contracts. The typographical changes are as follows: (i) Section 4.2 of the CDS Procedures, the words ''Bilateral CDS Contract'' are changed to ''Bilateral CDS Transaction'', and (ii) Section 8.4 of the CDS Procedures, the words ''submission of'' are added. According to ICE Clear Europe, these changes are made solely to correct typographical and cross-reference drafting in the text of the Rules and make no substantive changes to the Rules.

In its filing with the Commission, ICE Clear Europe indicated that it has engaged in extensive private consultation with its CDS Clearing Members involving both operational and legal consultation groups and has presented the changes to its CDS Risk Committee, which approved the changes. ICE Clear Europe has also engaged in a public consultation process in relation to all the changes, pursuant to the Circulars referred to above, and as required under applicable U.K. legislation. This public consultation involved the publication of such Circulars on a publicly accessible portion of the Internet Web site of ICE Clear Europe. ICE Clear Europe has received no opposing views from its Clearing Members in relation to the proposed rule amendments and received no responses to its public consultations during the consultation period.

III. Discussion

Section 19(b)(2)(B) of the Act directs the Commission to approve a proposed rule change of a self-regulatory organization if it finds that such proposed rule change is consistent with the requirements of the Act and the rules and regulations thereunder applicable to such organization.[5] For example, Section 17A(b)(3)(F) of the Act[6] requires, among other things, that the rules of a clearing agency be designed to remove impediments to and perfect the mechanism of a national system for the prompt and accurate clearance and settlement of securities transactions and to assure the safeguarding of securities and funds in the custody or control of the clearing agency or for which it is responsible.

If approved, the proposed rule change would allow ICE Clear Europe to implement certain operational changes related to the processing of CDS contracts, including with respect to (i) CDS Contracts that arise as a result of the end-of-day pricing process and (ii) and the process by which settlement and coupon payments under CDS Contracts will be made. After considering these changes, the Commission believes that the proposed rule change is consistent with Section 17A(b)(3)(F) of the Act, including ICE Clear Europe's obligation to ensure that its rules be designed to remove impediments to and perfect the mechanism of a national system for the prompt and accurate clearance and settlement of securities transactions.

IV. Conclusion

On the basis of the foregoing, the Commission finds that the proposal is consistent with the requirements of the Act and in particular with the requirements of Section 17A of the Act[7] and the rules and regulations thereunder.

It is therefore ordered, pursuant to Section 19(b)(2) of the Act,[8] that the proposed rule change (File No. SR–ICEEU–2012–01) be, and hereby is, approved.[9]

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[10]

Kevin M. O'Neill,

Deputy Secretary.

[FR Doc. 2012–7203 Filed 3–23–12; 8:45 am]

BILLING CODE 8011–01–P

[5] 15 U.S.C. 78s(b)(2)(B).

[6] 15 U.S.C. 78q–1(b)(3)(F).

[7] 15 U.S.C. 78q–1.

[8] 15 U.S.C. 78s(b)(2).

[9] In approving the proposed rule change, the Commission considered the proposal's impact on efficiency, competition and capital formation. 15 U.S.C. 78c(f).

[10] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–66630; File No. SR–DTC–2012–02]

Self-Regulatory Organizations; The Depository Trust Company; Notice of Filing of Proposed Rule Change To Amend Rules Relating to the Issuance of and Maturity Presentment Processing for Money Market Instruments

March 20, 2012.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act'')[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on March 8, 2012, The Depository Trust Company (''DTC'') filed with the Securities and Exchange Commission (''Commission'') the proposed rule change as described in Items I and II below, which Items have been prepared primarily by DTC. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

I. Self-Regulatory Organization's Statement of the Terms of the Substance of the Proposed Rule Change

The purpose of DTC's proposed rule change is to amend DTC's Settlement Service Guide to change certain deadlines associated with processing issuances and maturity presentments of money market instruments.[3]

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, DTC included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. DTC has prepared summaries, set forth in sections (A), (B), and (C) below, of the most significant aspects of these statements.[4]

(A) Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

The Maturity Presentment[5] processing for money market instruments (''MMIs'') is initiated automatically by DTC each morning for all of the MMIs maturing that day. The automatic process electronically sweeps all maturing positions of MMI CUSIPs from a participant's accounts against credits in the amount of the payments to be received with respect to such presentments. The matured MMIs are delivered to the applicable issuing or paying agent (''IPA''),[6] also a DTC

[3] The text of the proposed rule change is attached as Exhibit 5 to DTC's filing, which is available at *www.dtcc.com/downloads/legal/rule_filings/2012/dtc/2012-02.pdf.*

[4] The Commission has modified the text of the summaries prepared by DTC.

[5] The term ''Maturity Presentment'' is defined in Rule 1 of DTC's Rules and Procedures as a Delivery Versus Payment of matured MMI securities from the account of a presenting participant to the designated paying agent account for that issue as provided for in Rule 9(C) and as specified in DTC's procedures.

[6] Rule 1 of DTC's Rules and Procedures defines the term ''MMI Issuing Agent'' generally as a participant acting as an issuing agent for an issuer with respect to a particular issue of MMI securities of that issuer and an ''MMI Paying Agent'' generally as a participant acting as a paying agent for an

participant, the IPA's account is debited for the amount of the maturity proceeds. The debited amount will be included in the IPA's net settlement amount. Similarly, the credits of participants that presented maturing MMIs will be included in those participants' net settlement amount.

MMI issuers and IPAs commonly view the primary source of funding for payments of MMI maturity presentments as flowing from new issuances of MMIs in the same program by that MMI issuer on that day. If the MMI issuer issues more new MMIs than the number of MMIs maturing, there would be no net funds payment to the IPA on that day. When an issuer has more maturing MMIs than new issuances, it will have an obligation to pay to the IPA the net amount of the MMIs maturing that day over the new issuance. When net maturity presentments exceed issuances on a day, IPAs at their discretion may provide significant intraday credit to issuers for the excess. However, the IPA as an agent of an issuer is not obligated to fund the presentments unless payment is received from the issuer.

The business relationships between IPAs and their MMI issuers play a key role in determining if an IPA will execute a refusal to pay at DTC with respect to an MMI issuance. Because maturity presentments of an issuer's MMIs for which the IPA acts are processed automatically and randomly against the IPA's account, IPAs are permitted to refuse to pay for all of an issuer's maturities in an MMI program.[7] An IPA that refuses payment on an MMI maturity must communicate its intention to DTC using the DTC Participant Terminal/Browser Service (PTS/PBS) MMRP function. This communication, referred to as an Issuer Failure/Refusal to Pay (''RTP''), allows the Paying Agent to enter a refusal to pay instruction for a particular issuer up to 3 p.m. Eastern Time (''ET'') on the date of the affected maturity presentment. Such an instruction causes DTC to reverse all transactions related to any new issuances in that issuer's program, including the maturity presentments. An IPA RTP may have a significant market impact on the issuer's reputation and credit standing.

In late 2009, DTC and the Securities Industry and Financial Markets Association (''SIFMA'') formed the MMI Blue-Sky Task Force (''Task Force'') to address systemic and unique market risks associated with the MMI process, including those related to DTC's maturity presentment processing. The Task Force, along other money market industry members,[8] determined that DTC's current MMI processing schedule permits issuance and other transaction activity that can affect an issuer's net funding amount or proceeds after the 3 p.m. E.T. deadline for RTP instructions.[9] Accordingly, DTC is proposing to amend certain provisions in its Settlement Service Guide in order to provide increased transparency for IPAs before the 3 p.m. RTP deadline, which should in turn assist IPAs in making better informed credit decisions when an issuer has more maturities than issuances.[10] The proposed changes to DTC's Settlement Service Guide include:

1. Making all MMI issuance and deliver order transactions subject to DTC's Receiver Authorized Delivery (''RAD'') function for approval regardless of transaction value.[11]

2. Adjusting the MMI valued new issuance cut-off time from 3:20 p.m. E.T. to 2 p.m. E.T.

3. Creating a new MMI RAD approval of new valued issuance transactions at 2:45 p.m. E.T. instead of 3:30 p.m. E.T.[12]

DTC is proposing to implement the changes described above on the date the proposed rule change is approved.

DTC believes that the proposed rule change is consistent with the requirements of the Act and the rules and regulations thereunder applicable to DTC because the earlier cutoffs and the elimination of MMI matched reclaims should reduce potential late day reversals due to non-payment instructions from IPAs, which should in turn allow IPAs to determine before the 3 p.m. RTP deadline if there is a funding shortfall with respect to an issuer. Additionally, the changes to the Settlement Service Guide, as proposed, should serve to reinforce consistent MMI business practices by implementing earlier deadlines for issuances processing and receiver approvals. DTC expects these proposed changes to make the processing of MMI issuances and maturities more efficient. Finally, the proposed rule change is consistent with the CPSS/IOSCO Recommendations for Securities Settlement Systems applicable to DTC.

(B) Self-Regulatory Organization's Statement on Burden on Competition

DTC does not believe that the proposed rule change would impose any burden on competition.

(C) Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants or Others

The proposed rule change was developed in consultation with the Task Force and other securities industry organizations. Written comments relating to the proposed rule change have not been solicited or received. DTC will notify the Commission of any written comments received by DTC.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within forty-five days of the date of publication of this notice in the **Federal Register** or within such longer period (i) as the Commission may designate up to ninety days of such date if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the self-regulatory

issuer with respect to a particular issue of MMI securities of that issuer. Since MMI Issuing Agents and MMI Paying Agents are often a single entity, this filing refers to both entities collectively as ''IPAs.''

[7] DTC employs a four-character acronym to designate an issuer's MMI program. An issuer can have multiple acronyms. The IPA uses the acronym(s) when submitting an instruction of its refusal to pay for a given issuer's program(s).

[8] The other MMI related industry members include the Commercial Paper Issuers Working Group, which is comprised of both bank and corporate commercial paper issuers, and the Asset Managers Forum, whose whole membership is buy-side investors.

[9] The Task Force's short-term recommendations focused on addressing the credit risk exposure that IPAs face because of a lack of transparency around the amount an issuer must fund to cover its maturities. The recommendations called for funding maturities by 1 p.m. if there is a net debit and for establishing new deadlines of 1:30 p.m. for the submission of all new valued issuance to DTC and of 2:15 p.m. for receivers of new valued issuance to accept delivery. By implementing these new deadlines, the IPA should have sufficient time to calculate its exposure and if a funding shortfall exists work with the issuer to resolve the deficiency before 3 p.m., which is the deadline at DTC for the IPA to fund the maturities or to issue an RTP. For more information, see DTCC Press Release ''DTCC and SIFMA Release Task Force Report Identifying Opportunities to Mitigate Systemic and Credit Risk in Processing of Money Market Instruments'' (March 31, 2011), which can be found at *www.dtcc.com/news/press/releases/2011/dtcc_sifma_task_force_report.php*.

[10] In addition to the changes described in this filing, DTC is also making unrelated technical changes to its Settlement Service Guide in order to conform its rules to current practice and to a prior rule filing, SR–DTC–2011–01, approved in January 2011. Securities Exchange Release Act No. 34–63775 (January 26, 2011), 76 FR 5843 (February 2, 2011).

[11] This change will eliminate the ability for a receiver to ''force'' a reclaim upon an IPA close to or after the 3 p.m. RTP cutoff that would alter the amount of funding an issuer needs to provide late in the day and would also eliminate matched reclaims that currently override participant risk management controls.

[12] If a transaction is not approved in RAD by 2:45 p.m. E.T., the transaction will drop and will need to be resubmitted.

organization consents, the Commission will:

(A) By order approve or disapprove the proposed rule change or

(B) Institute proceedings to determine whether the proposed rule change should be disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*) or
- Send an email to *rule-comments@sec.gov*. Please include File Number SR–DTC–2012–02 on the subject line.

Paper Comments

- Send paper comments in triplicate to Elizabeth M. Murphy, Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submission should refer to File Number SR–DTC–2012–02. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Section, 100 F Street NE., Washington, DC 20549–1090, on official business days between the hours of 10 a.m. and 3 p.m. Copies of such filings will also be available for inspection and copying at the principal office of DTC and on DTC's Web site at *http://www.dtcc.com/downloads/legal/rule_filings/2012/dtc/2012-02.pdf*. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–DTC–2012–02 and should be submitted on or before April 16, 2012.

For the Commission by the Division of Trading and Markets, pursuant to delegated authority.[13]

Kevin M. O'Neill,

Deputy Secretary.

[FR Doc. 2012–7205 Filed 3–23–12; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–66631; File No. SR–ICC–2012–03]

Self-Regulatory Organizations; ICE Clear Credit LLC; Notice of Filing of Proposed Rule Change to Its Risk Model To Reduce the Current Level of Risk Mutualization Among Its Clearing Participants and To Modify the Initial Margin Risk Model so That It Is Easier for Market Participants To Measure Their Risk

March 20, 2012.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act'')[1] and Rule 19b–4 thereunder[2] notice is hereby given that on March 8, 2012, ICE Clear Credit LLC (''ICC'') filed with the Securities and Exchange Commission (''Commission'') the proposed rule change as described in Items I, II, and III below, which Items have been prepared primarily by ICC. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The purpose of the proposed rule change (*i.e.,* modifications to the ICC risk model) is to (1) reduce the current level of risk mutualization among ICC's clearing participants (Modification #1) and (2) modify the initial margin risk model approach in a manner that will make it easier for market participants to measure their risk (Modification #2).

As discussed in more detail in Item II below, Modification #1 reduces the level of default resources held in the mutualized ICC guaranty fund and significantly increases the level of resources held in initial margin. Modification #2 modifies the initial margin risk model by removing the conditional Recovery Rate stress-scenarios and adding a new Recovery Rate sensitivity component that is computed by considering changes in Recovery Rate assumptions that impact the Net Asset Value of the portfolio.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, ICC included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. ICC has prepared summaries, set forth in sections (A), (B), and (C) below, of the most significant aspects of these statements.[3]

(A) Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

The counterparty risk brought to ICC by any of its clearing participants is ''collateralized'' in the first instance by the clearing participant counterparty through its initial margin. In the event that any defaulting clearing participant's initial margin and guaranty fund contributions are insufficient to cover its obligations, any such deficit is mutualized across all non-defaulting clearing participants through their respective guaranty fund contributions.[4] The respective initial margin contributions of non-defaulting clearing participants are *not* mutualized and would *not* be used to satisfy the deficit of another clearing participant's default.

Since its launch, ICC has maintained a very high percentage of its default resources in the mutualized guaranty fund. On average, the size of the guaranty fund has been roughly 50% of the initial margin held by ICC. Whereas, historically, traditional futures clearinghouse have maintained guaranty funds in an amount equal to roughly 5–7% of the initial margin held. In other words, at ICC, the clearing participant resources available to be mutualized in the guaranty fund versus the resources available as initial margin have been approximately ten times greater on a

[13] 17 CFR 200.30–3(a)(12).

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] The Commission has modified the text of the summaries prepared by ICC.

[4] ICC has also contributed a total of $50 million to the guaranty fund. $25 million of ICC's contribution is exposed prior to the mutualization of the non-defaulting clearing participants' contributions and the second $25 million of ICC's contribution is mutualized along with the non-defaulting clearing participants' contributions to the guaranty fund on a pro rata basis.

percentage basis than at traditional futures clearinghouses.

Modification #1 reduces the level of default resources held in the mutualized ICC guaranty fund and increases the level of resources held in initial margin (collateral).

The ICC guaranty fund is relatively much larger, as compared to traditional futures clearinghouses, in part because the guaranty fund model is currently designed to cover the uncollateralized losses that would result from the three single names that would cause the greatest losses when entering a state of default. Modification #1 incorporates into the initial margin risk model the single name that causes the greatest loss when entering a state of default (i.e., the single name that results in the greatest amount of loss when stress-tested). This change effectively collateralizes the loss that would occur from the single name that causes the greatest loss entering a state of default. Consequently, the amount of uncollateralized loss that would result from the three single names causing the greatest losses when entering a state of default is reduced, thereby reducing the amount of required guaranty fund contributions.

This change to the guaranty fund and initial margin risk model will, as noted above, result in a reduction of the guaranty fund requirements and an increase in the initial margin requirements. However, it is important to note that the decrease in the guaranty fund and the increase in initial margin requirements are not symmetrical. Instead, based upon current portfolios, for every $1 decrease to the guaranty fund there will be a corresponding increase to the initial margin requirements of approximately $5.

Modification #2 modifies the initial margin risk model by removing the conditional Recovery Rate stress-scenarios and adding a new Recovery Rate sensitivity component that is computed by considering changes in the Recovery Rate assumptions and their impact on the Net Asset Value of the Credit Default Swap portfolio. This modification will make it easier for market participants to measure their risk.

ICC believes that the proposed rule change is consistent with the requirements of Section 17A of the Act and the rules and regulations thereunder applicable to it. ICC believes that by reducing the level of default resources held in the guaranty fund and increasing the level of default resources held as initial margin and by modifying the initial margin risk model as described above, it is able to safeguard securities and funds in its custody or control or for which it is responsible.

(B) Self-Regulatory Organization's Statement on Burden on Competition

ICC does not believe the proposed rule change would have any impact, or impose any burden, on competition.

(C) Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants or Others

Written comments relating to the proposed rule change have not been solicited or received. ICC will notify the Commission of any written comments received by ICC.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 45 days of the date of publication of this notice in the **Federal Register** or within such longer period up to 90 days (i) as the Commission may designate if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the self-regulatory organization consents, the Commission will:

(A) By order approve or disapprove the proposed rule change or

(B) institute proceedings to determine whether the proposed rule change should be disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR–ICC–2012–03 on the subject line.

Paper Comments

Send paper comments in triplicate to Elizabeth M. Murphy, Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–ICC–2012–03. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Section, 100 F Street NE., Washington, DC 20549, on official business days between the hours of 10 a.m. and 3 p.m. Copies of such filings will also be available for inspection and copying at the principal office of ICC and on ICC's Web site at *https://www.theice.com/publicdocs/regulatory_filings/ICEClearCredit_030812.pdf.*

All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–ICC–2012–03 and should be submitted on or before April 16, 2012.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[5]

Kevin O'Neill,

Deputy Secretary.

[FR Doc. 2012–7206 Filed 3–23–12; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–66629; File No. SR–ICEEU–2012–05]

Self-Regulatory Organizations; ICE Clear Europe Limited; Notice of Filing of Proposed Rule Change To Amend the ICE Clear Europe CDS Procedures, Finance Procedures, and Rules With Respect to the Calculation and Payment of Interest on Mark-To-Market Margin on CDS Transactions

March 20, 2012.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act'')[1] and Rule 19b–4 thereunder[2] notice is hereby given that on March 12, 2012, ICE Clear Europe Limited (''ICE Clear Europe'') filed with the Securities

[5] 17 CFR 200.30–3(a)(12).

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

and Exchange Commission (''Commission'') the proposed rule change as described in Items I and II below, which Items have been prepared primarily by ICE Clear Europe. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

ICE Clear Europe proposes rule and CDS procedural amendments that are intended to modify the terms of the calculation and payment of interest on mark-to-market margin for CDS transactions. The amendments would provide further detail for calculation of interest on mark-to-market margin for CDS at the position level, but would not change the overall calculation of that interest. The amendments would also move payment of such interest from a monthly to a daily basis.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, ICE Clear Europe included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. ICE Clear Europe has prepared summaries, set forth in sections (A), (B), and (C) below, of the most significant aspects of these statements.[3]

(A) Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

As noted above, the proposed rule changes consist of operational changes to the Rules, CDS Procedures and Finance Procedures ICE Clear Europe has consulted with its CDS Risk Committee, which supports the proposed amendment.

ICE Clear Europe submits proposed amendments to its CDS Procedures, Finance Procedures and Rules in relation to the calculation and payment of interest on the mark-to-market margin for CDS transactions on a daily basis. The amendments also clarify, consistent with ICE Clear Europe's current practice, mark-to-market margin and variation margin may be required to be provided by the clearing member to the clearing house or vice versa.

ICE Clear Europe proposes to update Parts 1 and 3 of its CDS Procedures to state more clearly the daily calculation of interest on mark-to-market margin for CDS transactions and to provide further detail about such calculations. The new definitions of ''Daily Aggregate MTM Interest Amount,'' ''Mark-to-Market Interest'' and ''Mark-to-Market Margin Balance'' and the provisions of Part 3 of the CDS Procedures reflect these changes. ''Daily Aggregate MTM Interest Amount'' means for any Clearing Member for a currency on any day the sum of the Mark-to-Market Margin Balances in such currency for that day in respect of that Clearing Member. The Daily Aggregate MTM Interest Amount will be determined separately in respect of the Clearing Member's Proprietary Account and any relevant customer account. Where the Daily Aggregate MTM Interest Amount is positive, it will be owed by ICE Clear Europe to the relevant Clearing Member; where it is negative, the relevant Clearing Member will owe the absolute value of the Daily Aggregate MTM Interest Amount to ICE Clear Europe. ''Mark-to-Market Interest'' will mean interest calculated daily in accordance with the market convention for the relevant currency by applying the applicable overnight rate. ''Mark-to-Market Margin Balance'' will mean the sum of all Mark-to-Market Margin delivered up to, but excluding that day, by the relevant Clearing Member in respect of such CDS Contract to ICE Clear Europe less all Mark-to-Market Margin delivered up to, but excluding that day, by ICE Clear Europe in respect of such CDS Contract to such Clearing Member, as determined at the close of business on such day. Pursuant to the amendments to Section 3.1 of the CDS Procedures and 6.11(h)(iv) of the Finance Procedures, interest on Mark-to-Market Margin will be payable on a daily, rather than a monthly basis, although the interest calculation is substantially unchanged.

ICE Clear Europe believes that the proposed rule change is consistent with the requirements of Section 17A of the Act[4] and the rules and regulations thereunder applicable to ICE Clear Europe because it amends rules and procedures which allow ICE Clear Europe to effectively manage risk. As such, it assures the safeguarding of securities and funds, which are in the custody or control of ICE Clear Europe or for which it is responsible.

(B) Self-Regulatory Organization's Statement on Burden on Competition

ICE Clear Europe does not believe the proposed rule and procedural changes would have any impact, or impose any burden, on competition.

(C) Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants or Others

Written comments relating to the proposed rule change have not been solicited or received. ICE Clear Europe will notify the Commission of any written comments received by ICE Clear Europe.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 45 days of the date of publication of this notice in the **Federal Register** or within such longer period up to 90 days (i) as the Commission may designate if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the self-regulatory organization consents, the Commission will:

(A) By order approve or disapprove the proposed rule change or

(B) institute proceedings to determine whether the proposed rule change should be disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*) or
- Send an email to *rule-comments@sec.gov*. Please include File Number SR–ICEEU–2012–05 on the subject line.

Paper Comments

- Send paper comments in triplicate to Elizabeth M. Murphy, Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–ICEEU–2012–05. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/*

[3] The Commission has modified the text of the summaries prepared by ICE Clear Europe.

[4] 15 U.S.C. 78q–1.

rules/sro.shtml). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Section, 100 F Street NE., Washington, DC 20549, on official business days between the hours of 10 a.m. and 3 p.m. Copies of such filings will also be available for inspection and copying at the principal office of ICE Clear Europe and on ICE Clear Europe's Web site at *https://www.theice.com/publicdocs/regulatory_filings/ICE_Clear_Europe_PAI_and_MTMM_Proposed_Changes.pdf*.

All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–ICEEU–2012–05 and should be submitted on or before April 16, 2012.

For the Commission by the Division of Trading and Markets, pursuant to delegated authority.[5]

Kevin O'Neill,

Deputy Secretary.

[FR Doc. 2012–7204 Filed 3–23–12; 8:45 am]

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[5] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–66627; File No. SR–NYSEARCA–2012–18]

Self-Regulatory Organizations; NYSE Arca, Inc.; Notice of Filing of Proposed Rule Change To List and Trade Shares of the APMEX Physical—1 oz. Gold Redeemable Trust Pursuant to NYSE Arca Equities Rule 8.201

March 20, 2012.

Pursuant to Section 19(b)(1) [1] of the Securities Exchange Act of 1934 (the ''Act'') [2] and Rule 19b–4 thereunder,[3] notice is hereby given that, on March 5, 2012, NYSE Arca, Inc. (the ''Exchange'' or ''NYSE Arca'') filed with the Securities and Exchange Commission (the ''Commission'') the proposed rule change as described in Items I and II below, which Items have been prepared by the self-regulatory organization. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of the Substance of the Proposed Rule Change

The Exchange proposes to list and trade shares of the APMEX Physical—1 oz. Gold Redeemable Trust (the ''Trust'') pursuant to NYSE Arca Equities Rule 8.201. The text of the proposed rule change is available at the Exchange, the Commission's Public Reference Room, and *www.nyse.com*.

II. Self-Regulatory Organization's Statement of the Purpose of, and the Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the self-regulatory organization included statements concerning the purpose of, and basis for, the proposed rule change and discussed any comments it received on the proposed rule change. The text of those statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant parts of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and the Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to list and trade Units (''Units'') of the Trust under NYSE Arca Equities Rule 8.201.[4] Under NYSE Arca Equities Rule 8.201, the Exchange may propose to list and/or trade pursuant to unlisted trading privileges (''UTP'') ''Commodity-Based Trust Shares.''[5] The Commission has previously approved listing on the Exchange under NYSE Arca Equities Rule 8.201 shares of the ETFS Gold Trust [6], as well as the Sprott Physical Gold Trust.[7] In addition, the Commission has approved listing on the Exchange of streetTRACKS Gold Trust and iShares COMEX Gold Trust.[8] Prior to their listing on the Exchange, the Commission approved listing of the streetTRACKS Gold Trust on the New York Stock Exchange (''NYSE'') and listing of iShares COMEX Gold Trust on the American Stock Exchange LLC.[9]

[1] 15 U.S.C.78s(b)(1).

[2] 15 U.S.C. 78a.

[3] 17 CFR 240.19b–4.

[4] *See* the Registration Statement for the Trust on Form F–1, filed with the Commission on December 23, 2011 (No. 333–178745) (as amended, the ''Registration Statement''). The descriptions of the Trust, the Units and the gold market contained herein are based, in part, on the Registration Statement.

[5] Commodity-Based Trust Shares are securities issued by a trust that represent investors' discrete identifiable and undivided beneficial ownership interest in the commodities deposited into the Trust.

[6] Securities Exchange Act Release No. 59895 (May 8, 2009), 74 FR 22993 (May 15, 2009) (SR–NYSEArca–2009–40).

[7] Securities Exchange Act Release No. 61496 (February 4, 2010), 75 FR 6758 (February 10, 2010) (SR–NYSEArca–2009–113).

[8] *See* Securities Exchange Act Release Nos. 56224 (August 8, 2007), 72 FR 45850 (August 15, 2007) (SR–NYSEArca-2007–76) (approving listing on the Exchange of the streetTRACKS Gold Trust); 56041 (July 11, 2007), 72 FR 39114 (July 17, 2007) (SR–NYSEArca-2007–43) (order approving listing on the Exchange of iShares COMEX Gold Trust).

[9] *See* Securities Exchange Act Release Nos. 50603 (October 28, 2004), 69 FR 64614 (November 5, 2004) (SR–NYSE–2004–22) (order approving listing of streetTRACKS Gold Trust on NYSE); 51058 (January 19, 2005), 70 FR 3749 (January 26, 2005) (SR–Amex–2004–38) (order approving listing of iShares COMEX Gold Trust on the American Stock Exchange LLC).

APMEX Precious Metals Management Services, Inc. is the manager of the Trust (''Manager''),[10] Computershare Trust Company of Canada is the trustee of the Trust (''Trustee''),[11] and RBC Dexia Investor Services (''RBC Dexia'') Trust is the custodian of the Trust (''Custodian'') [12] and the valuation agent for the Trust (''Valuation Agent'').[13]

According to the Registration Statement, the investment objective of the Trust is to invest and hold substantially all of its assets in 1 oz. gold coins. The assets of the Trust will consist of 1 oz. American Gold Eagle bullion coins and 1 oz. Canadian Gold Maple Leaf bullion coins, although the Trust is also permitted to purchase 1 oz. gold bullion bars and rounds. The Trust seeks to provide a secure, convenient and exchange-traded investment alternative for investors interested in holding 1 oz. gold coins. The Trust believes that investing in 1 oz. gold coins has several advantages over investing in bullion, including (i) 1 oz. gold coins contain a known quantity of gold that is guaranteed by the government issuing them, whereas gold bullion has no such guarantee; (ii) it is a crime to tamper with 1 oz. gold coins, so those receiving them have more confidence as to the amount of gold the coin contains; (iii) because the amount of gold contained in each unit is small (1 oz.), redemptions for the underlying precious metal can be done at lower amounts than similar investments in gold bullion; and (iv) if an investor chooses to redeem the investor's interests in the Trust, the investor would receive 1 oz. gold coins, the value of which is known since the precious metals it contains are of a known and fixed quantity, as opposed to bullion, the value of which would have to be re-determined for the benefit of a transferee when the investor wanted to transfer it. The Trust does not anticipate making regular cash distributions to unitholders. The Trust is neither an investment company registered under the Investment Company Act of 1940 [14] nor a commodity pool for purposes of the Commodity Exchange Act.[15]

The Exchange represents that the Units satisfy the requirements of NYSE Arca Equities Rule 8.201 and thereby qualify for listing on the Exchange.[16]

Operation of the Gold Bullion Market

According to the Registration Statement, the global gold market is influenced by several industries, organizations and activities which may be categorized as banking, governmental, mining, manufacturing and investment. For example:

- Multi-national bullion banks provide a variety of bullion-related products and services to the global gold market, including physical purchases and sales, gold leasing, hedging and gold deposits.
- Governments, through central bank activities for each nation, buy, sell and hold gold reserves.
- Mining companies produce gold directly and combine with other companies that produce gold as a by-product and companies that are scrap merchants and gold recyclers to provide a supply of gold.
- Manufacturers which use gold in the process of making or constructing a final product, including products in the industrial community, electronic products, dental applications and jewelry, combine to provide demand for gold.
- Investment activities of individuals, corporations, pooled accounts, exchange traded funds and other investment oriented trading activity combine to provide demand for gold.

Gold can be purchased in a physical form in almost every country in the world. The most popular forms of gold ownership include coins, most commonly in one ounce gold coins of a known fineness, struck by sovereign governments including the United States, Canada, South Africa, Australia, Austria and others, along with bars and rounds also commonly containing one ounce or less in a known or expressed fineness, provided by major gold refiners including Johnson & Matthey, Produits Artistiques Métaux Précieux, Credit Suisse and others. Physical gold can be purchased in the United States through most precious metal or coin dealers and over the Internet, while in Europe and other parts of the world, purchases can also be made through banks and other financial institutions.

Physical gold is paid at the time of delivery and generally the prices track the world price of gold directly plus a small premium for manufacturing and distribution costs. The owner of the gold has a responsibility to store and insure the gold, but that is at the discretion of the owner. Private depositories and bank safe deposit vaults are available for annual fees.

Sources of gold supply include both mine production and recycling of existing previously mined gold. Gold mine production constitutes the largest portion of gold supplied into the market annually. Gold scrap, from jewelry and other manufactured products, is the second largest source of annual gold supply. Although many central banks have recently been purchasing gold rather than selling, central bank sales have historically accounted for a significant supply of gold coming into the marketplace.

[10] The Manager is a Delaware corporation and is a wholly-owned subsidiary of Apmex, Inc. (formerly known as American Precious Metals Exchange, Inc.) (the ''parent company''). The parent company is an Internet-based company that sells a selection of precious metals in bar and coin form to the public, primarily in the United States. The Manager is responsible for the day-to-day activities and administration of the Trust. The Manager manages, or causes to be managed at the expense of the Trust, the Trust pursuant to the management agreement, as authorized under the amended and restated trust agreement. Additional details regarding the Manager are set forth in the Registration Statement.

[11] The Trustee is a trust company existing under the federal laws of Canada. The Trustee holds title to the Trust's assets and has exclusive authority over the assets and affairs of the Trust. The Trustee has a fiduciary responsibility to act in the best interest of the unitholders. Additional details regarding the Trustee are set forth in the Registration Statement.

[12] RBC Dexia is a trust company existing under the federal laws of Canada, and is a jointly-owned subsidiary of the Royal Bank of Canada and Dexia N.V./S.A. RBC Dexia is affiliated with a broker-dealer. RBC Dexia has represented to the Exchange that it has put in place and will maintain the appropriate information barriers and controls between itself and the broker dealer affiliate so that the broker dealer affiliate will not have access to information concerning the composition and/or changes to the Trust's holdings that are not available on the Trust's Web site. The Custodian will act as custodian for the assets that the Trust owns and will appoint a gold custodian as sub-custodian to hold the 1 oz. gold coins, as described below. The Custodian is responsible for the property of the Trust (cash, cash equivalents (as described below) and gold coins) that the Custodian, its affiliates or appointed sub-custodians directly hold. The Bank of Nova Scotia, a sub-custodian of RBC Dexia, will act as gold custodian for the 1 oz. gold coins that the Trust owns. The Custodian is responsible for and bears the risk of loss of, and damage to, the Trust's 1 oz. gold coins that it deposits with the Bank of Nova Scotia (the ''Gold Custodian''), regardless of whether they are actually in possession of the gold custodian, subject to certain limitations based on events beyond the control of the Custodian. The Manager, with the consent of the Trustee, may determine to change the custodial arrangements of the Trust. The Trust represents that the agreement with the Custodian does not limit the options the Custodian may use for storage, although the Custodian must comply with the law and regulations as promulgated by the federal government of Canada and the Province of Ontario. Currently, the Custodian has decided to store the gold with the Bank of Nova Scotia which bank attests that it meets all applicable legal and regulatory requirements. Additional details regarding the Custodian and the gold custodian are set forth in the Registration Statement.

[13] The Trust's Valuation Agent will calculate the value of the net assets of the Trust on a daily basis and reconciles all purchases and redemptions of Units to determine the net asset value (''NAV''), as described further below.

[14] 15 U.S.C. 80a–1.

[15] 17 U.S.C. 1 [sic].

[16] With respect to application of Rule 10A–3 (17 CFR 240.10A–3) under the Act, the Trust relies on the exemption contained in Rule 10A–3(c)(7).

Mine production includes gold produced from a primary or a secondary deposit. For the five years ended December 31, 2010, gold from net mining activity (gold from mining producers less hedging by producers) has been relatively stable at a level of between approximately 2,031 metric tons and approximately 2,686 metric tons per year. Notwithstanding this steady production, this supply represents only approximately 58% to 63% of the total annual demand for gold. During the seven quarters ended September 30, 2011, with rising prices and, accordingly, greater incentive for mining, net mining activity is providing from 57% to 75% of the total demand for gold.

According to the Registration Statement, central banks, as well as other governmental agencies, have historically retained gold as a strategic asset. However, since 1989, the governmental segment has been a net seller of gold to the private sector until the fourth quarter of 2010. For the five years ended December 31, 2010, central bank sales of gold have declined from approximately 370 metric tons in 2006, or approximately 10% of total annual supply of 3,574 metric tons, turning to negative supply, or otherwise a factor in demand, to approximately 77 metric tons in 2010, a significant turnaround from a source of supply to a source of demand. In the seven quarters ended September 30, 2011, central bank sales have provided a source of demand, not a source of supply, except for the fourth quarter of 2010, ranging from the provision of demand of as much as approximately 148 metric tons in the third quarter of 2011, to a swing as a source of supply of approximately 18 metric tons in the fourth quarter of 2010. Overall for 2010, central banks provided a net of approximately 77 metric tons of demand, not supply, in the global market.

According to the Registration Statement, as a result of the swing from net seller in 2006 to a net buyer in 2010, these central banks have ceased providing a supply of gold to the market and have become a consumer of gold in the market. This dramatic shift may have significant impact on supply and demand relationships in the future.

Industrial gold demand includes production for electronic devices, dental applications and other uses. Gold has manufacturing properties that include malleability, resistance to corrosion and conductivity that make the metal ideal for a variety of electronic components such as smartphones and notebooks and in emerging technology such as nanoparticles. During the five years ended December 31, 2010, industrial demand has been as high as 466 metric tons per year to as low as 410 metric tons per year and has represented as much as 13% of total annual demand and as low as 11% of total annual demand. For the seven quarters ended September 30, 2011, industrial demand has increased from 114 metric tons in the first quarter of 2010 to 120 metric tons in the third quarter of 2011, with a high of 120 metric tons in the third quarters of 2010 and 2011.

Gold jewelry continues to be the primary source of gold demand worldwide, although in 2009, institutional demand exceeded jewelry demand. India is the most significant market for gold jewelry demand followed by China, the United States and Saudi Arabia. For the five years ended December 31, 2010, jewelry demand has been between 50% and 69% of the total annual demand. For the seven quarters ended September 30, 2011, jewelry demand has varied from 418 metric tons in the second quarter of 2010 to 558 metric tons in the first quarter of 2011. As a portion of total demand during the seven quarters ended September 30, 2011, jewelry has represented between 38% and 60% of total demand.

Retail and institutional investment demand includes government gold coin production, medals and other coin and bar production, gold bar hoarding, increases in gold on deposit for exchange traded funds and other gold fund investments and other physical investment demand. For the five years ended December 31, 2010, investment demand has grown from 830 metric tons in 2006 to 1,518 metric tons in 2010. During the seven quarters ended September 30, 2011, investment demand has fluctuated from 248 metric tons in the first quarter of 2010 to a high of 575 metric tons in the second quarter of 2010. For the seven quarters ended September 30, 2011, investment demand has provided from 27% to 52% of total demand.

Gold is traded around the world daily on a 24 hour basis. Gold can be owned directly or indirectly in several ways and traded in several different markets depending on the form of gold ownership or rights to own the underlying gold.

Determining Value of Gold Coins

According to the Registration Statement, the Valuation Agent will determine the fair market value of the 1 oz. American Gold Eagle bullion coins [17] and the 1 oz. Canadian Gold Maple Leaf bullion coins [18] by using the closing price information provided by Bloomberg Finance LP. The closing price of each coin is separately recognized by Bloomberg as COINGEAG and COINGCML, respectively, determined by the mid-point between the high bid and low ask for that coin on the applicable date.[19] Bloomberg's quotations are based on information provided by the Certified Coin Exchange. The Certified Coin Exchange is an electronic exchange for coins that obtains bid and ask information from its member dealers, of which there are more than 500, that post over 100,000 bid and ask prices on a wide variety of coins, including the 1 oz. American Gold Eagle and the 1 oz. Canadian Gold Maple Leaf, at a given time. To the extent that the Trust holds 1 oz. gold bars or rounds, the fair market value is equal to the market value of 1 oz. of gold in the current market, which the Trust will obtain from Bloomberg.

1 oz. gold coins are manufactured and distributed by the United States Mint and the Royal Canadian Mint.[20] Both of these mints offer the 1 oz. gold coins at a price equal to the value of 1 oz. of gold plus a premium. The premium is a percentage of the value of the then applicable price of 1 oz. of gold, and such amount is intended to cover the cost of manufacturing and certain other distribution costs. This premium is set by the respective mints and generally does not change substantially, although

[17] The American Eagle Gold Bullion Coin was authorized by the Bullion Coin Act of 1985 and recorded under United States Code, Title 31, Subtitle IV, Chapter 51, Subchapter II, Section 5112.

[18] The Canadian Gold Maple Leaf is the official gold bullion coin of Canada and is struck by the Royal Canadian Mint and enabled under the Royal Canadian Mint Act, Revised Statutes of Canada 1985, c.-R–9, as amended. The objectives of the Royal Canadian Mint are ''to mint coins in anticipation of profit and to carry out other related activities.'' The Royal Canadian Mint has all the powers of a natural person. The Royal Canadian Mint is a Schedule III–Part II for profit Crown corporation under the Financial Administration Act and operates under the general direction of its board of directors. The Royal Canadian Mint reports to the Canadian Parliament through the Minister of Transport, Infrastructure and Communities.

[19] Information relating to gold coin prices is updated by Bloomberg each business day as of 4:30 p.m. Eastern time.

[20] According to the Registration Statement, the American Gold Eagle and the Canadian Gold Maple Leaf, are two of the most recognized forms of gold in the world. These 1 oz. gold coins are struck by the United States and Canadian Governments so that there are a sufficient number of coins available to meet the demand for them, and are backed by the full faith and credit of the respective countries as to the quality of the coins. These 1 oz. gold coins are primarily distributed through qualifying financial institutions and large bullion dealers that meet the criteria of the respective issuing countries.

the price of the 1 oz. of gold changes with market conditions.

Each of the mints offers the 1 oz. gold coins to a group of authorized distributors, which are approved by the respective mint.[21] Each of the mints has established a set of criteria that must be met by prospective and current authorized distributors. The authorized distributors for the United States Mint include eight companies, of which three are publicly traded banks, four are units of publicly traded companies, and one is a private company.[22] There are six authorized distributors for the Royal Canadian Mint, of which one is a unit of a publicly traded bank, three are units of publicly traded companies and two are private companies.[23]

Based on the supply chain from the respective mints, the authorized distributors set their prices based on current market conditions, creating a spread between the purchase price of the 1 oz. gold coins from the mints and the selling price of such distributors with such selling price based on current market demand. Since the market value of the 1 oz. gold coins are primarily based on the price of 1 oz. of gold, and, further, since all of the coins from the respective mints are identical, the selling price of all the authorized distributors is substantially similar in what is a competitive commodity market. Generally, these authorized distributors (or ''primary dealers'') offer the 1 oz. gold coins to wholesalers and to larger retail sellers.

The Trust will hold substantially all of its assets in the 1 oz. American Gold Eagle bullion coin and the 1 oz. Canadian Gold Maple Leaf bullion coin.[24]

The United States Mint charges the authorized purchasers a premium of 3% over the price of gold on the 1 oz American Gold Eagle. The Royal Canadian Mint does not disclose or publish the premium for the 1 oz. Gold Maple Leaf.[25]

Each of the mints has established a set of criteria that must be met by prospective and current authorized distributors. The United States Mint publishes the application to become an authorized purchaser online at *http://www.usmint.gov/consumer/index.cfm?action=AmericanEagles*, while the Royal Canadian Mint does not publish any of its criteria.

According to the Registration Statement, the correlation of the market value of the 1 oz. American Gold Eagle coin to the gold spot, as reported by Bloomberg Finance L.P., for the period from January 2009 to August 2011 as of the last trading day each month, is 0.978. The correlation of the market value of the 1 oz. Canadian Gold Maple Leaf coin to the gold spot, as reported by Bloomberg Finance L.P., for the period from January 2009 to August 2011 as of the last trading day each month, is 0.976. The data provided by Bloomberg Finance L.P. for the value of the 1 oz. American Gold Eagle Coin and the 1 oz. Canadian Gold Maple Leaf Coin is the same data that will be used by the Trust to calculate the NAV.

Commodity Exchanges

There are several commodity exchanges around the world that provide the ability to purchase a contract for delivery of a fixed amount of gold in a specified purity, or fineness, with delivery at a specific time in the future. Commodity exchange contracts can be satisfied either financially or by physical delivery. The current delivery month contract trades at a price that approximates the current value of the underlying amount of gold while future delivery months trade at a premium to the current delivery month. Generally, the longer the time until the contract delivery month, the higher the premium per ounce of gold the contract trades relative to the current delivery month. Because the contracts expire and must be satisfied either financially or by physical delivery, there is some action required by the contract owner every month for the current contract.

Gold Company Stocks

Stock exchanges around the world trade the equities of gold mining companies. These publicly traded gold mining companies may or may not have profitable operations and may or may not have ownership or rights to gold mines. The gold mines in which the gold mining companies have exploration rights may or may not be producing gold. The public disclosure of the details and explanations of the operations of the gold mining companies that trade on the exchanges vary in each country and in each trading exchange.

Gold Derivatives

There are several worldwide exchanges that trade gold derivatives. Gold derivatives include options to purchase or sell gold, forwards and other forms of trading rights to buy or sell gold. Such gold derivatives usually carry a fixed price of gold at which the gold must be bought or sold and have a tenor, or fixed timeframe when the right to buy or sell expires. Settlement of the derivative trade is most often completed financially and no physical gold is generally ever bought, sold or delivered. The owner of a derivative holds a right to buy or sell gold and not the physical gold and prices at which these derivatives trade are not directly related to the price of gold, but trade at prices that include the price of gold, the premium of the option, the remaining time before expiration of the option and other factors. Gold futures are traded on the COMEX, an affiliate of the Chicago

[21] The Trust deems authorized distributors to be those entities that have met the criteria established by the U.S. Mint and the Royal Canadian Mint, respectively, in their sole discretion, for the purposes of recognition as a buyer directly from such mint in order to distribute the products of the respective mint into the marketplace. These criteria include financial experience, operations and other criteria, that would be satisfactory to such mint.

[22] Authorized distributors of U.S. gold bullion coins are required to meet specified qualification criteria relating to experience as market-maker in gold coins, tangible net worth and audit by an independent certified public accounting firm. See ''Procedures to Qualify for Bulk Purchase of Gold Bullion Coins'', available at *http://www.usmint.gov/consumer/GoldAPRequirements.pdf*. The authorized distributors of American Gold Eagles for the United States Mint are published and known to be as follows: A–Mark Precious Metals, Scotia Mocatta, MTB, Prudential Securities, Coins 'N' Things, Commerzbank International, Deutsche Bank, and Tanaka Kinkinzoku.

[23] Although the Royal Canadian Mint does not publicize the requirements to become an authorized distributor or the authorized distributors themselves, the Manager believes that the following entities are authorized distributors of the Canadian Maple Leaf for the mint: A–Mark Precious Metals, Scotia Mocatta, MTB, Prudential Securities, Coins 'N' Things, and Dillon Gage.

[24] According to the Registration Statement, the American Gold Eagle coin contains one troy ounce of gold and, along with other alloys, uses the durable 22-karat standard (0.9167 fine gold or similar) for gold coinage. Each coin contains the stated amount of pure gold, plus small amounts of silver and copper alloys, added for increased hardness and durability. They are struck to the U.S. Mint's exacting standards for quality. Each one troy ounce coin must contain one troy ounce of pure gold, must weigh 1.0909 troy ounces, must have a diameter of 32.70 millimeters and must be 2.87 millimeters thick. The American Gold Eagle is required, by law, to be struck from newly mined sources of gold in the United States. The Canadian Gold Maple Leaf coin contains one troy ounce of gold with a 24-karat fineness of 0.9999. The coins are guaranteed for their weight, purity and fineness by the Government of Canada. The coin has a diameter of 30 millimeters and is 2.8 millimeters thick.

[25] Neither the United States Mint nor the Royal Canadian Mint sells the American Gold Eagle or the Canadian Maple Leaf directly to the public. Although the Web sites of the respective mints (the United States Mint at *http://www.usmint.gov/mint_programs/american_eagles/index.cfm?Action=american_eagle_gold* and the Royal Canadian Mint at *http://www.mint.ca/store/mint/about-the-mint/bullion-1300002*) discuss the 1 oz. gold coins manufactured by the respective mints, there is no opportunity to purchase directly from the mints. The United States Mint offers a listing of retailers by state and the Royal Canadian Mint offers a form to complete in order to identify a retailer. Neither of the mints offers a list of companies that are authorized purchasers from the respective mint and neither of the mints offers any explanation for premiums or pricing.

Mercantile Exchange, Inc., and the Tokyo Commodity Exchange.[26]

Gold Funds

There are several gold funds operating around the world with the majority of the funds traded on public exchanges in the form of open or closed end funds, or alternatively, in exchange traded funds. These publicly traded funds are a form of asset backed securities where the owner of the security holds an undivided interest in the pool of gold that the public fund holds. Generally, the public funds hold gold in safekeeping, and the value of the securities is directly related to the value of the gold that the public fund holds. However, there can be some trading premium or discount to the value of the underlying gold based on current market conditions, the need for liquidity by the owners of the public funds, temporary imbalances of buy or sell orders for the securities, tax treatments of the public funds, or other factors. Generally, the interest in the public funds is bought or sold through brokerage firms with official access to the exchanges on which the securities of the public funds trade.

Operation of the Trust

According to the Registration Statement, the Trust will not hold or trade in commodity futures contracts regulated by the Commodity Exchange Act, as administered by the U.S. Commodity Futures Trading Commission (''CFTC''). According to the Registration Statement, the Trust is not a commodity pool for purposes of the Commodity Exchange Act,[27] and none of the Manager, the Trustee or the underwriters is subject to CFTC regulation as a commodity pool operator or a commodity trading advisor in connection with the Units.

The Trust intends to invest in long-term holdings of 1 oz. gold coins but intends to hold highly liquid investments (consisting of short term certificates of deposit or any U.S. Government Security) or cash [sic] an amount equal to approximately 3% of its total net assets generally to pay expenses and cash redemptions. The Trust does not intend to speculate in gold. The Trust may be required to sell some of its 1 oz. gold coins from time to time in order to replenish the amount held in cash. The Trust is authorized to issue an unlimited number of Units.

Except with respect to cash and highly liquid investments that the Trust will hold to pay expenses and anticipated redemptions, the Trust expects to own only 1 oz. gold coins. While the Trust, pursuant to its investment guidelines (''Investment Guidelines''), will be permitted to invest up to 20% of its assets in securities other than 1 oz. gold coins, the Manager intends to invest and hold approximately 97% of the total net assets of the Trust in 1 oz. gold coins.[28]

The Manager will not buy and sell 1 oz. gold coins for the Trust through its current parent company, APMEX Precious Metals Exchange, Inc., of which the Manager's officers and directors are officers, or its affiliates.

To purchase all of the 1 oz. gold coins pursuant to the Trust's investment guidelines using the initial public offering proceeds, the Manager will negotiate on behalf of the Trust for multiple transactions with certain authorized distributors; all of such distributors are independent of the Manager and any affiliate of the parent company. These negotiations and related transactions will include the pricing of the 1 oz. gold coins, the proposed terms of payment and certain delivery requirements in each transaction for the 1 oz. gold coins to be received at the gold custodian.[29] For each transaction, the Manager expects that the price per coin for the specified number of coins in the order will be quoted and offered by the distributors at a fixed amount over the price of gold per ounce on a date certain in the future as published by London Gold Market Fixing, or the London PM Fix, although the Manager may use other processes to establish a fair, competitive market price and related terms.

The process of determining the worldwide price of gold occurs twice daily in London, once in the morning and once in the afternoon, by a committee of five internationally recognized bullion dealers, all of which are members of the London Bullion Market Association. Once the Manager identifies an offer of price and terms as acceptable for a transaction, it will prepare a purchase order for the transaction that specifies the Trust as the buyer and the seller as the identified distributor and will set forth in reasonable detail the price and terms. The Manager will sign the purchase order on behalf of the Trust and deliver it to the selling distributor. In accordance with the terms of the purchase order, funds will be delivered to the selling distributor directly from the Trust. As the physical delivery of the 1 oz. gold coins is completed at the gold custodian, a representative of the Manager will be present. At delivery, the Manager will inspect the 1 oz. gold coins and complete a random review of the count and authenticity of the gold content. Once the Manager is satisfied with the completeness and accuracy of the delivery of the 1 oz. gold coins, the gold custodian will put the 1 oz. gold coins in storage and provide a written report to the Custodian of the details of such receipt.

Secondary Market Trading

The Units may trade in the secondary market on the Exchange at prices that are lower or higher relative to their NAV per Unit. The amount of the discount or premium in the trading price relative to the NAV may be influenced by non-concurrent trading hours between the COMEX, which is the U.S. exchange on which gold for physical delivery is traded, and NYSE Arca and the Toronto Stock Exchange (''TSX''). While the Units will trade on NYSE Arca and the TSX until 4 p.m. Eastern time, liquidity in the global gold market will lessen after the close of the COMEX at 1:30 p.m. Eastern time. As a result, during this time, trading spreads, and the resulting premium or discount to the NAV may widen.

Trust Expenses

The Trust pays the Manager a monthly management fee. Fees payable to the Manager are calculated and accrued daily and will be paid monthly in arrears. Except as otherwise described in the Registration Statement, the Trust is responsible for all costs and expenses incurred in connection with

[26] For additional information regarding the gold bullion market, gold futures exchanges, and regulation of the global gold market, see Securities Exchange Act Release No. 59895 (May 8, 2009), 74 FR 22993 (May 15, 2009) (SR–NYSEArca–2009–40) (order approving Exchange listing and trading of the ETFS Gold Trust).

[27] 7 U.S.C. 1 *et seq.*

[28] The Trust's Investment Guidelines provide that the Trust will invest in and hold a minimum of 80% of the total net assets of the Trust in 1 oz. gold coins and hold no more than 20% of the total net assets of the Trust in cash (such as interest-bearing accounts and short-term certificates of deposit) or any U.S. Government Security, as defined below (except during the 90-day period following the closing of the Trust's initial public offering or additional offerings or prior to the distribution of assets of the Trust, at which times the Trust may hold more than 20% of the total net assets of the Trust in cash (such as interest-bearing accounts and short-term certificates of deposit) and U.S. Government Securities). U.S. Government Security means any direct obligations of or obligations guaranteed as to principal or interest by the United States, or securities issued or guaranteed by corporations in which the United States has a direct or indirect interest which shall have been designated by the Secretary of the Treasury, pursuant to section 3(a)(12) of the Act, as exempted securities for the purposes of the Exchange Act.

[29] This procedure will not apply continually and will apply only with respect to the initial public offering, and if the Trust engages in other public offerings for the purchase of gold using the initial public offering proceeds.

the ongoing operation and administration of the Trust including, but not limited to: The fees and expenses payable to and incurred by the Trustee, the Manager, any investment manager, the Custodian, any sub-custodians, including the gold custodian, the registrar and transfer agent, the Valuation Agent and the independent review committee; acquisition, transaction and handling costs for the 1 oz. gold coins (other than the redemption expenses); and storage fees for the 1 oz. gold coins.

Initial Public Offering and Redemption of Units

The Trust will offer at a minimum, 1,000,000 Units in its initial public offering. Each Unit will represent an equal, undivided ownership interest in the net assets of the Trust attributable to the Units. The Trust may not issue additional Units following the completion of this offering (i) unless the per Unit offering price, after deducting underwriting fees, commissions and offering expenses, will not yield proceeds less than the NAV per Unit, as determined on the business day prior to the pricing of the units to be sold in the offering, or (ii) except by way of Unit distribution in connection with an income distribution.

Unitholders may redeem their Units on a weekly basis, as described below.

Redemption of Units for 1 oz. Gold Coins

Subject to the terms of the amended and restated trust agreement, a unitholder may redeem Units at its option for 1 oz. gold coins on each Thursday. Unitholders who redeem their Units for 1 oz. gold coins are entitled to receive a redemption price equal to 100% of the aggregate NAV of the redeemed Units determined at 4 p.m., Eastern time, on the Thursday on which NYSE Arca and/or the TSX is open for trading for the week in respect of which the redemption request is processed, or the weekly redemption date and time, less the redemption expenses, or the gold redemption amount. Such redemption requests must be for a minimum redemption amount of at least $10,000 (the ''gold redemption minimum'').

A unitholder that owns a sufficient number of Units (a number of Units equal to the gold redemption minimum) who desires to exercise his, her or its redemption privileges for 1 oz. gold coins must do so by instructing the unitholder's broker, who must be a direct or indirect participant of Depository Trust Company in the United States (''DTC''), or CDS Clearing and Depository Services, Inc. in Canada (''CDS''), to deliver to the registrar and transfer agent, on behalf of the unitholder a written notice (the ''gold redemption notice'') of the unitholder's intention to redeem Units for 1 oz. gold coins. The Trust's registrar and transfer agent must receive a gold redemption notice no later than 4 p.m., Eastern time, on the third day on which NYSE Arca or the TSX is open for trading prior to the weekly redemption date and time. The Trust will process any gold redemption notice that it receives after that time on the next weekly redemption date, following the date on which the unitholder gives timely notice.

A common carrier will deliver the 1 oz. gold coins to be delivered to a unitholder as a result of a redemption of Units, and the shipping provider will fully insure the 1 oz. gold coins during transit. The Trust will engage the shipping service provider in connection with a redemption. The 1 oz. gold coins can be delivered to any physical address (subject to approval by the Trust). In the event that a redeeming unitholder does not provide an acceptable physical address for delivery of its 1 oz. gold coins in its gold redemption notice, such unitholder may elect to either have up [sic] its 1 oz. gold coins delivered to the Manager for pickup by the unitholder at the office of the Manager or redeem its Units for cash as described below. If the unitholder requests that the 1 oz. gold coins be delivered to the Manager, the risk of loss transfers to the unitholder upon delivery to the Manager. Once the Trust places the 1 oz. gold coins representing the redeemed Units with the shipping service provider, which will fully insure the shipment, the Trust will have completed its responsibilities with respect to the redemption and the redeeming unitholder will bear the risk of loss of, and damage to, such 1 oz. gold coins and seek any redress for any loss or damage from the shipping service provider or the insurance provider, as the case may be. The shipping service provider will receive 1 oz. gold coins in connection with a redemption of Units approximately seven business days after the redemption is processed by the registrar and transfer agent.

Redemption of Units for Cash

According to the Registration Statement, subject to the terms of the amended and restated trust agreement, a unitholder may redeem Units at its option for cash on a monthly basis. Units redeemed for cash will receive a redemption price equal to 95% of the lesser of (i) the volume-weighted average trading price of the Units traded on NYSE Arca or, if trading has been suspended on NYSE Arca, the trading price of the Units traded on the TSX, for the last five days on which the respective exchange is open for trading during the month in which the redemption request is processed by the registrar and transfer agent, and (ii) the NAV of the redeemed Units as of 4 p.m., Eastern time, on the last day of the month on which NYSE Arca is open for trading during the month in which the redemption request is processed (in each case, less any applicable taxes). A redeeming unitholder will receive cash redemption proceeds approximately three business days after the end of the month in which the redemption notice is processed. The Trust will retain the remaining 5% of the value of the Units.

The Trust's registrar and transfer agent must receive a redemption notice no later than 4 p.m., Eastern time, on the 15th day of the month in order for the Manager to process such redemption notice that month or, if such day is not a business day, then on the immediately following day that is a business day. The Manager will process any redemption notice to redeem Units for cash that it receives after such time in the next month.

According to the Registration Statement, the Trust may suspend the right of unitholders to request a redemption of their Units or postpone the date of delivery or payment of the redemption proceeds (whether 1 oz. gold coins and/or cash, as the case may be) for any period during which the Trust determines that conditions exist which render impractical the sale of assets of the Trust or which impair the ability of the Trust or the Valuation Agent to determine the value of the assets of the Trust and the NAV or the redemption amount for the Units. Pursuant to Sections 5.7(2) and 5.7(3) of National Instrument 81–102, the Trust must apply to the Ontario Securities Commission, the securities regulatory authority for the jurisdiction in which the head office of the Trustee is located, for approval to suspend redemptions and must concurrently file a copy of the application with the securities regulatory authority in each of the other Canadian jurisdictions in which the Units will be offered. The Trust may suspend redemptions only after the application is approved by the Ontario Securities Commission and has not been disallowed by any of the other relevant Canadian jurisdictions.[30]

[30] Other Canadian securities regulatory authorities which must be notified are as follows:

In the event of any such suspension, the Trust will issue a press release, and publicly file such press release with the Commission via the Edgar system, with the TSX and with the Canadian securities regulatory authorities on SEDAR, announcing the suspension and will advise all agents of the Trust, as applicable. The suspension may apply to all requests for redemption received prior to the suspension, but as for which payment has not been made, as well as to all requests received while the suspension is in effect. All unitholders making such requests will be advised of the suspension and that the redemption will be effected at a price determined on the first valuation date that the value of the net assets of the Trust per Unit is calculated following the termination of the suspension. All such unitholders will have, and will be advised that during such suspension of redemptions that they have, the right to withdraw their requests for redemption. The suspension will terminate in any event on the first business day on which the condition giving rise to the suspension has ceased to exist or when the Trust has determined that such condition no longer exists, provided that no other condition under which a suspension is authorized then exists, at which time the Trust will issue a press release announcing the termination of the suspension and will advise all agents of the Trust, as applicable. Subject to applicable Canadian and U.S. securities laws, any declaration of suspension made by the Trust will be conclusive.

During any period in which the right of unitholders to request a redemption of their Units for 1 oz. gold coins and/or cash is suspended, the Trust will direct the Trust's Valuation Agent to suspend the calculation of the value of the net assets of the Trust and the NAV. During any such period of suspension, the Trust will not issue or redeem any Units.

Termination Events

The Trust does not have a fixed termination date but will dissolve and be subsequently terminated in the event that:

- There are no Units outstanding;
- The Trustee resigns or is removed and no successor trustee is appointed within the time limit prescribed in the amended and restated trust agreement;
- The Manager resigns and no successor manager is appointed and approved by unitholders within the time limit prescribed in the amended and restated trust agreement;
- The Manager is, in the opinion of the Trustee, in material default of its obligations under the amended and restated trust agreement and such default continues for 120 days from the date that the Manager receives notice of such default from the Trustee and no successor manager has been appointed by the unitholders;
- The Manager has been declared bankrupt or insolvent or has entered into liquidation or winding-up, whether compulsory or voluntary (and not merely a voluntary liquidation for the purposes of amalgamation or reconstruction), and no successor manager has been appointed by the unitholders within 90 days from such date;
- The Manager makes a general assignment for the benefit of its creditors or otherwise acknowledges its insolvency, and no successor manager has been appointed by the unitholders within 90 days of such date; or
- The assets of the Manager have become subject to seizure or confiscation by any public governmental authority, and no successor manager has been appointed by the unitholders within 90 days from such date.

In addition, the Trustee may at any time terminate and dissolve the Trust if, in the opinion of the Trustee, after consulting with the Manager and the independent review committee, the value of the net assets of the Trust has been reduced such that it is no longer economically feasible to continue the Trust and would be in the best interests of the unitholders to terminate the Trust, by giving each holder of Units at the time at least 90 days' notice. To the extent such termination in the discretion of the Manager may involve a matter that would be a ''conflict of interest matter'' as set forth in applicable Canadian laws, the Manager will refer the matter to the independent review committee established by the Manager for its recommendation. In connection with the termination of the Trust, the Trust will, to the extent possible, convert its assets to cash and, after paying or making adequate provision for all of the Trust's liabilities and expenses, distribute the net assets of the Trust to unitholders, on a pro rata basis, as soon as practicable after the termination date.

Valuation of Gold and Definition of NAV

The Valuation Agent will determine the value of the net assets of the Trust and the NAV on each business day, unless the Trust determines that its assets cannot be valued as frequently as a result of the occurrence of a force majeure event, such as a war, earthquake, hurricane, civil disturbance or terrorist act. The value of the net assets of the Trust as of the valuation time on each business day will be the amount obtained by deducting from the aggregate fair market value of the assets of the Trust as of such date an amount equal to the value of the liabilities of the Trust (excluding all liabilities represented by outstanding Units, if any) as of such date. The NAV will be determined by dividing the value of the net assets of the Trust on a date by the total number of Units then outstanding on such date. Registration or transfers of the Units may be made through the book-based system of CDS and/or DTC, each of which hold the Units on behalf of its participants (i.e., brokers), which in turn may hold the Units on behalf of their customers.

Intraday Indicative Value

The Trust Web site will provide an intraday indicative value (''IIV'') per share for the Units, as calculated by a third party financial data provider during the Exchange's Core Trading Session (9:30 a.m. to 4 p.m. Eastern time).[31] The IIV will be calculated by:

1. Subtracting the closing spot price of gold for the prior business day from the current applicable spot price of gold (the ''Spread'');
2. Multiplying the Spread by the aggregate number of the Trust's 1 oz. gold coins for the prior business day (the ''Adjustment'');
3. Dividing the Adjustment by the aggregate number of units of the Trust outstanding for the prior business day (the ''Per Unit Adjustment''); and
4. Adding the Per Unit Adjustment to the NAV per Unit of the Trust for the prior business day.

Availability of Information

The Web site for the Trust, which the Trust will launch upon the closing of the initial public offering, will contain the following information, on a per Unit basis, for the Trust:

(a) The midpoint of the bid-ask price at the close of trading in relation to the NAV as of the time the NAV is

British Columbia Securities Commission, Alberta Securities Commission, Saskatchewan Securities Commission, Manitoba Securities Commission, Autorite des marches financiers, New Brunswick Securities Commission, Nova Scotia Securities Commission, Securities Commission of Newfoundland and Labrador, and Prince Edward Island Securities Office, Office of the Attorney General.

[31] The IIV on a per Unit basis disseminated during the Core Trading Session should not be viewed as a real-time update of the NAV, which will be calculated once a day.

calculated (''Bid/Ask Price''), and a calculation of the premium or discount of such price against such NAV; and

(b) Data in chart format displaying the frequency distribution of discounts and premiums of the Bid/Ask Price against the NAV, within appropriate ranges, for each of the four previous calendar quarters. The Web site for the Trust will also provide the Trust's prospectus, as well as the two most recent reports to stockholders.

The Trust Web site also will provide the last sale price of the Units as traded in the U.S. market, as well as a breakdown of the holdings of the Trust by coin type.

Currently, the Consolidated Tape Plan does not provide for dissemination of the spot price of a commodity, such as gold, over the Consolidated Tape. However, there will be disseminated over the Consolidated Tape the last sale price for the Units, as is the case for all equity securities traded on the Exchange. In addition, there is a considerable amount of gold price and gold market information available on public Web sites and through professional and subscription services. The IIV relating to the Units will be widely disseminated by one or more major market data vendors at least every 15 seconds during the Core Trading Session.[32]

Investors may obtain on a 24-hour basis gold pricing information based on the spot price for an ounce of gold from various financial information service providers, such as Reuters and Bloomberg. Reuters and Bloomberg provide at no charge on their Web sites delayed information regarding the spot price of gold and last sale prices of gold futures, as well as information about news and developments in the gold market. Reuters and Bloomberg also offer a professional service to subscribers for a fee that provides information on gold prices directly from market participants. An organization named EBS provides an electronic trading platform to institutions such as bullion banks and dealers for the trading of spot gold, as well as a feed of live streaming prices to Reuters and Moneyline Telerate subscribers. Gold coin price information is widely available for free from many precious metals dealers. For example, it is free at *www.APMEX.com* with a delay of several minutes. Investors also can obtain gold coin pricing information on the Certified Coin Exchange Web site at w*ww.certifiedcoinexchange.com.*

Complete real-time data for gold futures and options prices traded on the COMEX are available by subscription from Reuters and Bloomberg. The NYMEX also provides delayed futures and options information on current and past trading sessions and market news free of charge on its Web site. There are a variety of other public Web sites providing information on gold, ranging from those specializing in precious metals to sites maintained by major newspapers, such as The Wall Street Journal. In addition, the London AM Fix and London PM Fix are publicly available at no charge at *www.thebulliondesk.com.*

The Trust's daily (or as determined by the Manager in accordance with the amended and restated trust agreement) NAV is posted on the Trust's Web site as soon as practicable. The Exchange will provide on its Web site (*www.nyx.com*) a link to the Trust's Web site. In addition, the Exchange will make available over the Consolidated Tape quotation information, trading volume, closing prices and NAV for the Units from the previous day.

Criteria for Initial and Continued Listing

The Trust will be subject to the criteria in NYSE Arca Equities Rule 8.201(e) for initial and continued listing of the Units.

It is anticipated that a minimum of 1,000,000 Units will be required to be outstanding at the start of trading. The minimum number of Units required to be outstanding is comparable to requirements that have been applied to previously listed shares of the Sprott Physical Gold Trust.[33] The Exchange believes that the anticipated minimum number of Units outstanding at the start of trading is sufficient to provide adequate market liquidity.

Trading Rules

The Exchange deems the Units to be equity securities, thus rendering trading in the Fund subject to the Exchange's existing rules governing the trading of equity securities. Trading in the Units on the Exchange will occur in accordance with NYSE Arca Equities Rule 7.34(a). The Exchange has appropriate rules to facilitate transactions in the Units during all trading sessions. As provided in NYSE Arca Equities Rule 7.6, Commentary .03, the minimum price variation (''MPV'') for quoting and entry of orders in equity securities traded on the NYSE Arca Marketplace is $0.01, with the exception of securities that are priced less than $1.00 for which the MPV for order entry is $0.0001.

With respect to trading halts, the Exchange may consider all relevant factors in exercising its discretion to halt or suspend trading in the Units. Trading on the Exchange in the Units may be halted because of market conditions or for reasons that, in the view of the Exchange, make trading in the Units inadvisable. These may include: (1) The extent to which conditions in the underlying gold market have caused disruptions and/or lack of trading, or (2) whether other unusual conditions or circumstances detrimental to the maintenance of a fair and orderly market are present. In addition, trading in Units will be subject to trading halts caused by extraordinary market volatility pursuant to the Exchange's ''circuit breaker'' rule.[34] The Exchange will halt trading of the Units on the Exchange if trading in the Units is halted on TSX and in the event the Trust directs the Trust's Valuation Agent to suspend the calculation of the value of the net assets of the Trust and the NAV.

Surveillance

The Exchange intends to utilize its existing surveillance procedures applicable to derivative products (including Commodity-Based Trust Shares) to monitor trading in the Units. The Exchange represents that these procedures are adequate to properly monitor Exchange trading of the Units in all trading sessions and to deter and detect violations of Exchange rules and applicable federal securities laws.

NYSE Arca Equities Rule 8.201 sets forth certain restrictions on ETP Holders acting as registered Market Makers in the Units to facilitate surveillance. Pursuant to NYSE Arca Equities Rule 8.201(g), an ETP Holder acting as a registered Market Maker in the Units is required to provide the Exchange with information relating to its trading in the underlying gold, related futures or options on futures, or any other related derivatives. Commentary .04 of NYSE Arca Equities Rule 6.3 requires an ETP Holder acting as a registered Market Maker, and its affiliates, in the Units to establish, maintain and enforce written policies and procedures reasonably designed to prevent the misuse of any material nonpublic information with respect to such products, any components of the related products, any physical asset or commodity underlying the product, applicable currencies, underlying indexes, related futures or

[32] Currently, it is the Exchange's understanding that several major market data vendors display and/or make widely available IIVs published on CTA or other data feeds.

[33] *See* note 7, *supra.*

[34] *See* NYSE Arca Equities Rule 7.12.

options on futures, and any related derivative instruments (including the Units).

As a general matter, the Exchange has regulatory jurisdiction over its ETP Holders and their associated persons, which include any person or entity controlling an ETP Holder. A subsidiary or affiliate of an ETP Holder that does business only in commodities or futures contracts would not be subject to Exchange jurisdiction, but the Exchange could obtain information regarding the activities of such subsidiary or affiliate through surveillance sharing agreements with regulatory organizations of which such subsidiary or affiliate is a member.

The Exchange's current trading surveillance focuses on detecting securities trading outside their normal patterns. When such situations are detected, surveillance analysis follows and investigations are opened, where appropriate, to review the behavior of all relevant parties for all relevant trading violations. Also, pursuant to NYSE Arca Equities Rule 8.201(g), the Exchange is able to obtain information regarding trading in the Units and the underlying gold, gold futures contracts, options on gold futures, or any other gold derivative, through ETP Holders acting as registered Market Makers, in connection with such ETP Holders' proprietary or customer trades through ETP Holders which they effect on any relevant market. In addition, the Exchange may obtain trading information via the Intermarket Surveillance Group (''ISG'') from other exchanges who are members of the ISG, including the COMEX.[35]

The Exchange also has a general policy prohibiting the distribution of material, non-public information by its employees.

Information Bulletin

Prior to the commencement of trading, the Exchange will inform its ETP Holders in an Information Bulletin of the special characteristics and risks associated with trading the Units. Specifically, the Information Bulletin will discuss the following: (1) The procedures for purchases and redemptions of Units; (2) NYSE Arca Equities Rule 9.2(a), which imposes a duty of due diligence on its ETP Holders to learn the essential facts relating to every customer prior to trading the Units; (3) the requirement that ETP Holders deliver a prospectus to investors purchasing newly issued Units prior to or concurrently with the confirmation of a transaction; (4) the possibility that trading spreads and the resulting premium or discount on the Units may widen as a result of reduced liquidity of gold trading during the Core and Late Trading Sessions after the close of the major world gold markets; and (5) trading information. For example, the Information Bulletin will advise ETP Holders, prior to the commencement of trading, of the prospectus delivery requirements applicable to the Trust. The Exchange notes that investors purchasing Units directly from the Trust will receive a prospectus. ETP Holders purchasing Units from the Trust for resale to investors will deliver a prospectus to such investors.

In addition, the Information Bulletin will reference that the Trust is subject to various fees and expenses described in the Registration Statement. The Information Bulletin will also reference the fact that there is no regulated source of last sale information regarding physical gold, that the Commission has no jurisdiction over the trading of gold as a physical commodity, and that the CFTC has regulatory jurisdiction over the trading of gold futures contracts and options on gold futures contracts.

The Information Bulletin will also discuss any relief, if granted, by the Commission or the staff from any rules under the Act.

2. Statutory Basis

The basis under the Act for this proposed rule change is the requirement under Section 6(b)(5)[36] that an exchange have rules that are designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to remove impediments to, and perfect the mechanism of a free and open market and, in general, to protect investors and the public interest.

The Exchange believes that the proposed rule change is designed to prevent fraudulent and manipulative acts and practices in that the Shares will be listed and traded on the Exchange pursuant to the initial and continued listing criteria in NYSE Arca Equities Rule 8.201. The Exchange has in place surveillance procedures that are adequate to properly monitor trading in the Shares in all trading sessions and to deter and detect violations of Exchange rules and applicable federal securities laws. The Exchange may obtain information via ISG from other exchanges that are members of ISG or with which the Exchange has entered into a comprehensive surveillance sharing agreement, including COMEX.

The proposed rule change is designed to promote just and equitable principles of trade and to protect investors and the public interest in that there is a considerable amount of gold price and gold market information available on public Web sites and through professional and subscription services. Investors may obtain on a 24-hour basis gold pricing information based on the spot price for an ounce of gold from various financial information service providers. Complete real-time data for gold futures and options prices traded on the COMEX are available by subscription from Reuters and Bloomberg. In addition, the London AM Fix and London PM Fix are publicly available at no charge at *www.thebulliondesk.com.* The Trust's daily (or as determined by the Manager in accordance with the amended and restated trust agreement) NAV is posted on the Trust's Web site as soon as practicable. The market value of each coin is separately recognized by Bloomberg as COINGEAG and COINGCML, respectively. Bloomberg's quotations are based on information provided by the Certified Coin Exchange. The Trust's Web site will provide an IIV per share for the Units, as calculated by a third party financial data provider during the Exchange's Core Trading Session. The Trust's Web site will also provide the Trust's prospectus, as well as the two most recent reports to stockholders. The Exchange will provide on its Web site a link to the Trust's Web site. In addition, the Exchange will make available over the Consolidated Tape quotation information, trading volume, closing prices and NAV for the Units from the previous day.

The proposed rule change is designed to perfect the mechanism of a free and open market and, in general, to protect investors and the public interest in that it will facilitate the listing and trading of an additional type of exchange-traded product that will enhance competition among market participants, to the benefit of investors and the marketplace. As noted above, the Exchange has in place surveillance procedures relating to trading in the Shares and may obtain information via ISG from other exchanges that are members of ISG or with which the Exchange has entered into a comprehensive surveillance sharing agreement. In addition, as noted above, investors will have ready access to information regarding gold pricing and gold futures information.

[35] A list of ISG members is available at *www.isgportal.org.* The Investment Industry Regulatory Organization of Canada is a member of ISG.

[36] 15 U.S.C. 78f(b)(5).

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

No written comments were solicited or received with respect to the proposed rule change.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 45 days of the date of publication of this notice in the **Federal Register** or within such longer period (i) as the Commission may designate up to 90 days of such date if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the self-regulatory organization consents, the Commission will:

(A) By order approve or disapprove such proposed rule change, or

(B) Institute proceedings to determine whether the proposed rule change should be disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml);* or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR–NYSEARCA–2012–18 on the subject line.

Paper Comments

- Send paper comments in triplicate to Elizabeth M. Murphy, Secretary, Securities and Exchange Commission, 100 F Street, NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–NYSEARCA–2012–18. This file number should be included on the subject line if email is used.

To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street, NE., Washington, DC 20549, on official business days between the hours of 10 a.m. and 3 p.m. Copies of such filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–NYSEARCA–2012–18, and should be submitted on or before April 16, 2012.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[37]

Kevin M. O'Neill,

Deputy Secretary.

[FR Doc. 2012–7134 Filed 3–23–12; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–66625; File No. SR–MSRB–2012–04]

Self-Regulatory Organizations; Municipal Securities Rulemaking Board; Notice of Filing of Proposed Rule G–43, on Broker's Brokers; Proposed Amendments to Rule G–8, on Books and Records, Rule G–9, on Record Retention, and Rule G–18, on Execution of Transactions; and a Proposed Interpretive Notice on the Duties of Dealers That Use the Services of Broker's Brokers

March 20, 2012.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the ''Exchange Act'')[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on March 5, 2012, the Municipal Securities Rulemaking Board (''Board'' or ''MSRB'') filed with the Securities and Exchange Commission (''SEC'' or ''Commission'') the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the MSRB. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The MSRB is filing with the SEC a proposed rule change consisting of (i) proposed MSRB Rule G–43 governing the municipal securities activities of broker's brokers and certain alternative trading systems (''Proposed Rule G–43''), (ii) proposed amendments to MSRB Rule G–8 (on recordkeeping by broker's brokers and certain alternative trading systems), MSRB Rule G–9 (on record retention), and MSRB Rule G–18 (on agency trades and trades by broker's brokers) (collectively, the ''Proposed Amendments''); and (iii) a proposed interpretive notice on the duties of brokers, dealers, and municipal securities dealers (''dealers'') that use the services of broker's brokers (the ''Proposed Notice''). The MSRB requests that the proposed rule change be made effective six months after approval by the Commission.

The text of the proposed rule change is available on the MSRB's Web site at *www.msrb.org/Rules-and-Interpretations/SEC-Filings/2012-Filings.aspx*, at the MSRB's principal office, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the MSRB included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The MSRB has prepared summaries, set forth in Sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The MSRB decided to consider additional rulemaking concerning broker's brokers and the dealers that use their services due to the important role that broker's brokers play in the provision of secondary market liquidity for retail investors in municipal

[37] 17 CFR 200.30–3(a)(12).

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

securities. In 2004,[3] the MSRB issued a notice that, among other things, addressed the role of broker's brokers in large intra-day price differentials in the sale of retail size blocks of securities.

''Transaction Chains''

A frequent scenario in large intra-day price differentials occurs when a single block of securities moves through a ''chain'' of transactions during the day. The securities involved in these scenarios often are infrequently traded issues with credits that are relatively unknown to most market participants. In a typical case, the transaction chain starts with a dealer buying securities from a customer, usually in a ''retail'' size block of $5,000 to $100,000. The securities are then sold through a broker's broker. Two or more inter-dealer transactions follow, with a final sale of the securities being made by a dealer to a customer. In certain cases, the difference between the price received by the selling customer and the price received by the purchasing customer is abnormally large, exceeding 10% or more. In reviewing such transaction chains, it often appears that the two dealers effecting trades with customers at each end of the chain—one dealer purchasing from a customer and the other selling to a customer—did not make excessive profits on their trades. Instead, the abnormally large intra-day price differentials can be attributed in major part to the price increases found in the inter-dealer trading occurring after the broker's broker's trade.

The MSRB deferred its rulemaking on the subject of broker's brokers until the completion of Commission and Financial Industry Regulatory Authority (''FINRA'') enforcement actions, which subsequently highlighted broker's broker activities that constitute clear violations of MSRB rules.[4]

The MSRB recognizes that some broker's brokers make considerable efforts to comply with MSRB rules. However, given the nature of the rule violations brought to light by Commission and FINRA enforcement actions and the important role of broker's brokers in the provision of secondary market liquidity for retail investors, the MSRB determined that additional guidance and/or rulemaking concerning the activities of broker's brokers was warranted.

Summary of Proposed Rule G–43

The role of the broker's broker is that of intermediary between selling dealers and bidding dealers. Proposed Rule G–43(a) would set forth the basic duties of a broker's broker to such dealers.[5] Proposed Rule G–43(a)(i) would incorporate the same basic duty currently found in Rule G–18. That is, a broker's broker would be required to make a reasonable effort to obtain a price for the dealer that was fair and reasonable in relation to prevailing market conditions. The broker's broker would be required to employ the same care and diligence in doing so as if the transaction were being done for its own account.

Proposed Rule G–43(a)(ii) would provide that a broker's broker that undertook to act for or on behalf of another dealer in connection with a transaction or potential transaction in municipal securities could not take any action that would work against that dealer's interest to receive advantageous pricing. Under Proposed Rule G–43(a)(iii), a broker's broker would be presumed to act for or on behalf of the seller[6] in a bid-wanted, unless both the seller and bidders agreed otherwise in writing in advance of the bid-wanted.

Proposed Rule G–43(b) would create a safe harbor. The safe harbor would provide that a broker's broker that conducted bid-wanteds in the manner described in Proposed Rule G–43(b) would satisfy its pricing duty under Proposed Rule G–43(a)(i).[7] The provisions of the safe harbor are designed to increase the likelihood that the highest bid in the bid-wanted is fair and reasonable.

Proposed Rule G–43(b)(i) and (ii) would require a broker's broker to disseminate a bid-wanted widely and, in the case of securities of limited interest, to make a reasonable effort to reach dealers with specific knowledge of the issue or known interest in comparable securities.

Proposed Rule G–43(b)(iii) would require that each bid-wanted have a deadline for the acceptance of bids to assist in measuring compliance with the safe harbor.

Proposed Rule G–43(c)(i)(F) would require broker's brokers that availed themselves of the safe harbor to use predetermined parameters designed to identify possible off-market bids in the conduct of bid-wanteds. For example, the predetermined parameters could be based on yield curves, pricing services, recent trades reported to the MSRB's Real-Time Trade Reporting System (RTRS), or bids submitted to a broker's broker in previous bid-wanteds or offerings. Broker's brokers would be required to test the predetermined parameters periodically to see whether they were achieving their designed purpose.

Proposed Rule G–43(b)(iv) would permit a broker's broker that availed itself of the safe harbor to contact the high bidder in a bid-wanted about its bid price prior to the deadline for bids without the seller's consent, if the bid was outside of the predetermined parameters described above and the broker's broker believed that the bid might have been submitted in error. If the high bid was within the predetermined parameters, yet the broker's broker believed it might have been submitted in error (*e.g.,* because it significantly exceeded the cover bid), the broker's broker would be required to obtain the seller's consent before contacting the bidder. In all events, under Proposed Rule G–43(c)(i)(D), the broker's broker would be required to notify the seller if the high bidder's bid or the cover bid had been changed prior to execution and provide the seller with the original and changed bids.

Under Proposed Rule G–43(b)(v), a broker's broker would be required to notify the seller if the highest bid received in a bid-wanted was below the predetermined parameters and receive the seller's oral or written consent

[3] MSRB Notice 2004–3 (January 26, 2004).

[4] *FINRA* v. *Associated Bond Brokers, Inc.* Letter of Acceptance, Waiver and Consent No. E052004018001 (November 19, 2007) (settlement in connection with alleged violation of Rule G–17 by broker's broker due to lowering the highest bids to prices closer to the cover bids without informing either bidders or sellers); *FINRA* v. *Butler Muni, LLC* Letter of Acceptance, Waiver and Consent No. 2006007537201 (May 28, 2010) (settlement in connection with alleged violation of Rule G–17 by broker's broker due to failure to inform the seller of higher bids submitted by the highest bidders); *D. M. Keck & Company, Inc. d/b/a Discount Munibrokers, et al.,* Exchange Act Release No. 56543 (September 27, 2007) (settlement in connection with alleged violation of Rules G–13 and G–17 by broker's broker for dissemination of fake cover bids to both seller and winning bidder; also settlement in connection with alleged violation of Rules G–14 and G–17 by broker's broker due to payment to seller of more than highest bid on some trades in return for a price lower than the highest bid on other trades, in each case reporting the fictitious trade prices to the MSRB's Real-Time Trade Reporting System); *Regional Brokers, Inc. et al.,* Exchange Act Release No. 56542 (September 27, 2007) (settlement in connection with alleged violation of Rules G–13 and G–17 by broker's broker for dissemination of fake cover bids to both seller and winning bidder; broker's broker allegedly violated Rule G–17 by accepting bids after bid deadline); *SEC* v. *Wolfe & Hurst Bond Brokers, Inc. et al.,* Exchange Act Release No. 59913 (May 13, 2009) (settlement in connection with alleged violation of Rule G–17 by broker's broker for dissemination of fake cover bids to both seller and winning bidder and for lowering of the highest bids to prices closer to the cover bids without informing either bidders or sellers). These cases also involved violations of Rules G–8, G–9, and G–28.

[5] The duties of a broker's broker to any customers (as defined in Rule D–9) it may have are addressed under Rule G–18 (in the case of agency transactions) and Rule G–30 (in the case of principal transactions).

[6] Under Proposed Rule G–43(d)(ix), ''seller'' would mean the selling dealer, or potentially selling dealer, in a bid-wanted or offering and would not include the customer of a selling dealer.

[7] A broker's broker that did not avail itself of the safe harbor in section (b) would still be subject to sections (a), (c), and (d) of Proposed Rule G–43.

before proceeding with the trade. This required notice would have the effect of notifying the selling dealer that the high bid in a bid-wanted might be off-market. The selling dealer would then need to satisfy itself that the high bid was, in fact, fair and reasonable, if it wished to purchase the securities from its customer at that price as a principal.

Proposed Rule G–43(c) is designed to ensure that bid-wanteds and offerings are conducted in a fair manner. Many of the requirements of Proposed Rule G–43(c) would address behavior that would also be a violation of Rule G–17 (*e.g.,* the prohibitions on providing bidders with ''last looks,'' encouraging off-market bids, engaging in self-dealing, changing bid or cover prices without permission, and failing to inform the seller of the highest bid), although the requirements of Proposed Rule G–43(c) would not supplant those of Rule G–17. Other requirements of Proposed Rule G–43(c) are designed to notify sellers and bidders of the manner in which bid-wanteds and offerings will be conducted and disclosing potential conflicts of interest on the part of broker's brokers (*e.g.,* when a broker's broker has its own customers or when it allows an affiliate to enter bids). Proposed Rule G–43(c) would apply to the conduct of all bid-wanteds and offerings by broker's brokers, regardless of whether the broker's broker had elected to satisfy its Proposed Rule G–43(a)(i) pricing duty for bid-wanteds by means of the Proposed Rule G–43(b) safe harbor. A broker's broker would be required by Proposed Rule G–43(c)(i)(G) to describe the manner in which it would satisfy its Proposed Rule G–43(a)(i) pricing obligation in the case of offerings and in the case of bid-wanteds not subject to the Proposed Rule G–43(b) safe harbor.

Proposed Rule G–43(d) would contain the definitions of terms used in Proposed Rule G–43. Under Proposed Rule G–43(d)(iii), the term ''broker's broker'' would mean a dealer, or a separately operated and supervised division or unit of a dealer, that principally effects transactions for other dealers or that holds itself out as a broker's broker, whether a separate company or part of a larger company. Certain alternative trading systems would be excepted from the definition of ''broker's broker.'' To be excepted, the alternative trading system would be required, with respect to its municipal securities activities, to utilize only automated and electronic means to communicate with bidders and sellers in a systematic and non-discretionary fashion (with certain limited exceptions), limit any customers to sophisticated municipal market professionals, and operate in accordance with most of the provisions of Proposed Rule G–43(c). In essence, an alternative trading system qualifying for the exception from the definition of ''broker's broker'' would be subject to most [8] of the requirements of Proposed Rule G–43 except the Proposed Rule G–43(a)(i) pricing obligation.

Summary of Proposed Amendments

The proposed amendments to Rule G–8 would require recordkeeping designed to assist in the enforcement of Proposed Rule G–43. Records would be required to be kept of bids, offers, changed bids and offers, the time of notification to the seller of the high bid, the policies and procedures of the broker's broker concerning bid-wanteds and offerings, and any agreements by which bidders and sellers agreed to joint representation by the broker's broker.

Proposed Rule G–8(a)(xxv)(D) would require broker's brokers to keep the following records of communications with bidders and sellers regarding possibly erroneous bids: The date and time of the communication; whether the bid deviated from the predetermined parameters and, if so, the amount of the deviation; the full name of the person contacted at the bidder; the full name of the person contacted at the seller, if applicable; the direction provided by the bidder to the broker's broker following the communication; the direction provided by the seller to the broker's broker following the communication, if applicable; and the full name of the person at the bidder, or seller, if applicable, who provided that direction.

Under Proposed Rule G–8(a)(xxv)(E), the broker's broker would be required to keep records of the date and time it notified the seller that the high bid was below the predetermined parameters; the amount by which the bid deviated from the predetermined parameters; the full name of the person contacted at the seller; the direction provided by the seller to the broker's broker following the communication; and the full name of the person at the seller who provided that direction.

Proposed Rule G–8(a)(xxv)(J) would require that each broker's broker keep a record of its predetermined parameters, its analysis of why those predetermined parameters were reasonably designed to identify most bids that might not represent the fair market value of municipal securities that were the subject of bid-wanteds to which the parameters were applied, and the results of the periodic tests of such predetermined parameters required by Proposed Rule G–43(c)(i)(F).

Proposed Rule G–8(a)(xxvi) would impose comparable recordkeeping requirements on alternative trading systems.

In the case of broker's brokers or alternative trading systems that are separately operated and supervised divisions of other dealers, separately maintained or separately extractable records of the municipal securities activities of the broker's broker or alternative trading system would be required to be maintained to assist in enforcement of Proposed Rule G–43.

The proposed amendments to Rule G–9 would provide for the retention of the records described above for six years.

The proposed amendment to Rule G–18 would eliminate duplication, as the deleted text would be moved to Proposed Rule G–43(a)(i).

Summary of Proposed Notice

The Proposed Notice would discuss the duties of dealers that use the services of broker's brokers.

Under the Proposed Notice, selling dealers would be reminded that the high bid obtained in a bid-wanted or offering is not necessarily a fair and reasonable price and that such dealers have an independent duty under Rule G–30 to determine that the prices at which they purchase municipal securities as a principal from their customers are fair and reasonable. Selling dealers would be cautioned that any direction they provided to broker's brokers to ''screen'' other dealers from their bid-wanteds or offerings could affect whether the high bid represented a fair and reasonable price and should be limited to valid business reasons, not anti-competitive behavior. Selling dealers would be urged not to assume that their customers needed to liquidate their securities immediately without inquiring as to their customers' particular circumstances and discussing with their customers the possible improved pricing benefit associated with taking additional time to liquidate their securities. The Proposed Notice also would provide that, depending upon the facts and circumstances, the use of bid-wanteds by selling dealers solely for price discovery purposes, without any intention of selling the securities through the broker's brokers might be an

[8] Such an excepted alternative trading system would not be subject to the provision of Proposed Rule G–43(c)(i)(C) concerning compensation. It would also not be subject to the requirements of Proposed Rule G–43(c)(i)(D) and (E) in recognition of the fact that much of the municipal securities trading conducted on alternative trading systems is computerized and it would be difficult for alternative trading systems to satisfy those requirements.

unfair practice within the meaning of Rule G–17.

Under the Proposed Notice, bidding dealers that submitted bids to broker's brokers that they believed were below the fair market value of the securities or that submitted ''throw-away'' bids to broker's brokers would violate MSRB Rule G–13. The Proposed Notice would provide that, while Rule G–30 provides that bidders are entitled to make a profit, Rule G–13 does not permit them to do so by ''picking off'' other dealers at off-market prices.

2. Statutory Basis

The MSRB believes that the proposed rule change is consistent with Section 15B(b)(2) of the Securities Exchange Act (''Exchange Act''), which provides that:

> The Board shall propose and adopt rules to effect the purposes of this title with respect to transactions in municipal securities effected by brokers, dealers, and municipal securities dealers and advice provided to or on behalf of municipal entities or obligated persons by brokers, dealers, municipal securities dealers, and municipal advisors with respect to municipal financial products, the issuance of municipal securities, and solicitations of municipal entities or obligated persons undertaken by brokers, dealers, municipal securities dealers, and municipal advisors.

Section 15B(b)(2)(C) of the Exchange Act, provides that the rules of the MSRB shall:

> be designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in municipal securities and municipal financial products, to remove impediments to and perfect the mechanism of a free and open market in municipal securities and municipal financial products, and, in general, to protect investors, municipal entities, obligated persons, and the public interest.

The proposed rule change is consistent with Sections 15B(b)(2) and 15B(b)(2)(C) of the Exchange Act for the following reasons. Enforcement agencies have informed the MSRB that they continue to observe the same kinds of series of transactions in municipal securities that prompted the MSRB's 2004 pricing guidance. They have also informed the MSRB about their observations of other trading patterns that indicate some market participants may misuse the role of the broker's broker in the provision of secondary market liquidity and may cause retail customers who liquidate their municipal securities by means of broker's brokers to receive unfair prices. Proposed Rule G–43 is designed to improve pricing in the secondary market for retail investors in municipal securities by increasing the likelihood that bid-wanteds and offerings made through broker's brokers will result in fair and reasonable prices. It would do that by encouraging the wide dissemination of bid-wanteds to those who are likely to have interest in the securities, drawing potential below market prices to the attention of selling dealers, and discouraging the type of fraudulent and unfair conduct that may result in prices that are lower than they would otherwise have been. At the same time, Proposed Rule G–43 is structured in a manner that should not impede the operation of the secondary market for municipal securities. The MSRB has worked extensively with broker's brokers and other dealers to refine the proposed rule so that it targets abuses without reducing liquidity. The proposed amendments to Rules G–8 and G–9 would assist the Commission and FINRA in the enforcement of Rule G–43. The proposed amendment to Rule G–18 would eliminate unnecessary duplication as the broker's brokers pricing obligation would be transferred to Proposed Rule G–43. The Proposed Notice would remind dealers that use the services of broker's brokers of their own pricing obligations, as sellers and as bidders. In order for retail investors to receive fair and reasonable prices for their municipal securities, all dealers in the secondary market (whether sellers, broker's brokers, or bidders) must satisfy their pricing obligations.

B. Self-Regulatory Organization's Statement on Burden on Competition

The MSRB does not believe that the proposed rule change would impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Exchange Act, since it would apply equally to all broker's brokers and all alternative trading systems would have the opportunity to qualify for the exception from the definition of ''broker's broker.'' The MSRB notes that alternative trading systems that have voice brokerage components would be subject to all of the provisions of Proposed Rule G–43 and would not be given a competitive advantage over voice brokers. The MSRB also does not believe that the provisions of the proposed rule change would be unduly burdensome to broker's brokers or would have the effect of reducing the number of broker's brokers.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

On September 8, 2011, the MSRB requested comment on a draft of the proposed rule change.[9] Comments were received from Bond Dealers of America (''BDA''); Tom Dolan (''Mr. Dolan''); Hartfield, Titus & Donnelly, LLC (''Hartfield Titus''); Knight BondPoint; Regional Brokers, Inc. (''RBI''); Securities Industry and Financial Markets Association (''SIFMA''); TMC Bonds L.L.C. (''TMC''); Vista Securities, Inc. (''Vista Securities''); and Wolfe & Hurst Bond Brokers, Inc. (''Wolfe & Hurst''). Summaries of those comments and the MSRB's responses follow.

References in this section to ''Draft Rule G–43'' and ''Draft Rule G–8(a)(xxv)'' are to the draft version of Proposed Rule G–43 and the draft amendments to Rule G–8 upon which comment was requested in MSRB Notice 2011–50. The underlined rule text in this section does not reflect amendments agreed to by the MSRB's Board that are now included in the proposed rule change. This text has been included in this filing for the convenience of the reader because a number of the sections of the draft rule were reordered in the proposed rule change, although not substantively changed.

Draft Rule G–43(a)(i): Each dealer acting as a ''broker's broker'' with respect to the execution of a transaction in municipal securities for or on behalf of another dealer shall make a reasonable effort to obtain a price for the dealer that is fair and reasonable in relation to prevailing market conditions. The broker's broker must employ the same care and diligence in doing so as if the transaction were being done for its own account.

Comments: Wolfe & Hurst argued that ''it is not feasible for a broker's broker to determine fair market value nor is this the role of a broker's broker.'' It further argued that the clients of a broker's broker, broker-dealers and bank dealers, are in a better position to make a determination as to fair market value and should therefore be responsible for making this determination, not broker's brokers.

MSRB Response: The pricing duty of a broker's broker under Draft Rule G–43(a)(i) is not new. It is the same duty as that found in existing Rule G–18. In view of the important role that a broker's broker plays in arriving at a fair and reasonable price for a retail investor

[9] MSRB Notice 2011–50 (September 8, 2011).

in the secondary market, the MSRB considers it important to reemphasize that duty by including it in a rule directed solely to broker's brokers. Draft Rule G–43 clearly spells out the duties of broker's brokers and the conduct in which they may not engage. However, the MSRB also has proposed the companion notice on the duties of dealers using the services of broker's brokers because it agrees that both sellers and bidders also play an important role in the achievement of a fair and reasonable price for retail investors.

Draft Rule G–43(a)(iii): A broker's broker will be presumed to act for or on behalf of the seller in a bid-wanted or offering, unless both the seller and bidders agree otherwise in writing in advance of the bid-wanted or offering.

Comments: SIFMA requested that the reference to offerings in Draft Rule G–43(a)(iii) be removed. In the conduct of offerings, it said that there is not, in practice, a presumption that the broker's broker is working for the seller of bonds. It agreed that the presumption is accurate in the case of bid-wanteds. SIFMA also requested that ''the requirement to obtain prior written authorization from buyers and sellers should be clarified to reflect that the authorization is not intended to be required on a transaction-by-transaction basis, and that it may be included in a customer agreement or similar terms-of-use agreement for electronic systems.'' If a transaction-by-transaction scheme was envisioned, SIFMA requested the MSRB to reconsider such an approach, as obtaining written consents in this manner would be unworkable in practice.

Hartfield Titus also suggested restricting this section to bid-wanteds. It said that broker's broker activity in offerings is not consistent with the requirement of Draft Rule G–43(a)(iii). It said that a broker's broker works for either the seller or buyer in the negotiation, depending on which side initiates the negotiation.

RBI said that Draft Rule G–43(a)(iii) should be revised to indicate the difference between ''bid-wanteds'' and ''offerings.'' It agreed that the broker's broker represents the seller in the operation of a bid-wanted auction, but did not agree that the broker's broker will always work for the seller in an ''offering'' as it represents the bidder and seller equally.

Wolfe & Hurst said that a broker's broker is a ''dual-agent for the seller and the buyer of securities.'' It stated that it is not practicable to require a broker's broker to get written consent from both the buyer and seller in advance of the bid-wanted or offering. Wolfe & Hurst suggested that the definition of a broker's broker be revised to reflect the dual nature of their business. If not modified, it suggested that the provision clarify that ''the clients of a broker's broker could consent to a dual-agency relationship either through an initial service agreement or through Terms of Use on the firm's Web site.''

MSRB Response: The MSRB agrees with the comments concerning the role of a broker's broker in an offering and has modified Proposed Rule G–43(a)(iii) to remove references to ''offerings'' and to clarify that a broker's broker may obtain the requisite agreement in a customer agreement.

Draft Rule G–43(b)(i): Unless otherwise directed by the seller, a broker's broker must make a reasonable effort to disseminate a bid-wanted or offering widely (including, but not limited to, the underwriter of the issue and prior known bidders on the issue) to obtain exposure to multiple dealers with possible interest in the block of securities, although no fixed number of bids is required.

Comments: Hartfield Titus suggested restricting this section to bid-wanteds. It said that offerings are displayed by dealers on many systems and through many broker's brokers, unlike bid-wanteds, which are usually given to one broker's broker. Therefore the requirement for disseminating an offering widely is not necessary. In bid-wanteds, there is an obligation to find the buyer, but there is no such obligation for an offering. If any such an obligation does exist, it is with the seller.

SIFMA noted that, in offerings, a broker's broker will typically approach a dealer with known interest in the securities being offered or comparable securities, rather than reaching out to a wide universe of dealers.

MSRB Response: The MSRB has modified the safe harbor of Rule G–43(b) so that it applies to bid-wanteds, but not offerings, in view of the fact that most offerings are the subject of negotiations among a limited number of parties, unlike bid-wanteds, which are generally distributed widely.

Draft Rule G–43(b)(iii), (iv), (vii), and (viii):

(iii) A broker's broker may not encourage bids that do not represent the fair market value of municipal securities that are the subject of a bid-wanted or offering.

(iv) A broker's broker may not give preferential information to bidders in bid-wanteds or offerings, including where they currently stand in the bidding process (including, but not limited to, ''last looks,'' directions to a specific bidder that it should ''review'' its bid or that its bid is ''sticking out''); provided, however, that after the deadline for bids has passed, bidders may be informed whether their bids are the high bids (''being used'') in the bid-wanteds or offerings.

(vii) A broker's broker may not change a bid without the bidder's permission or change an offered price without the seller's permission.

(viii) A broker's broker must not fail to inform the seller of the highest bid in a bid-wanted or offering.

Comments: SIFMA said Draft Rule G–43(b) includes both safe harbor provisions and anti-fraud provisions for which the failure to adhere likely would constitute violations of Rule G–17. SIFMA thus requested that Draft Rule G–43(b)(iii), (iv), (vii), and (viii) be removed and either be published as interpretations under G–17, or moved to G–43(c).

SIFMA agreed with Draft Rule G–43(b)(iv), which prohibits broker's brokers from giving preferential treatment to bidders during a bid-wanted. However, it suggested that broker's brokers be allowed to inform a bidder whether their bid is being used before a bid-wanted is completed. Wolfe & Hurst agreed with SIFMA.

Hartfield Titus suggested restricting Draft Rule G–43(b)(iv) to bid-wanteds. It said that offerings are traded through negotiation rather than an auction. It also suggested that broker's brokers ''be allowed to give a bidder information on whether their bid is being used and subsequently prohibit them from any further bidding on the item.''

TMC noted that Draft Rule G–43, by its definition, includes all of the electronic trading platforms. It said that Draft Rule G–43(b)(vii) would be meaningless as all alternative trading systems would be required to inform every registered firm that every price they post will be changed, and in multiple ways, as each recipient firm defines its own matrix. Current guidelines already prohibit unfair dealing. TMC suggested that Draft Rule G–43(b)(vii) be removed or modified to accommodate private label Web sites that allow customers and registered reps to view inventory.

MSRB Response: The MSRB agrees that Draft Rule G–43(b)(iii), (iv), (vii), and (viii) should be applicable whether or not the safe harbor is availed of by a broker's broker and has moved these provisions to Proposed Rule G–43(c). The MSRB is sensitive to the need to maintain liquidity in the secondary market for municipal securities and has,

accordingly, modified the draft rule to permit a broker's broker to tell a bidder whether its bid is being used before a bid-wanted is completed. Nevertheless, to protect against gaming of the bid-wanted process, bidders would not be permitted to change their bids (other than to withdraw them) or resubmit bids for the same bid-wanted after receiving a comment. This portion of the draft rule has been moved to Proposed Rule G–43(c), so that it is applicable whether or not the safe harbor is used. As noted above, the MSRB has removed references to offerings in Proposed Rule G–43(b) and in the comparable text moved to Proposed Rule G–43(c).

The MSRB does not agree with TMC's comment. Under the proposal, a seller's consent would be required before an offered price could be changed by a broker's broker. The same would be true for alternative trading systems excepted from the rule. However, that consent could be obtained in advance (*e.g.,* in a customer agreement).

Draft Rule G–43(b)(v): Notwithstanding subsection (a)(ii) of this rule, each bid-wanted or offering must have a deadline for the acceptance of bids, after which the broker's broker must not accept bids or changes to bids. That deadline may be either a precise (or ''sharp'') deadline or an ''around time'' deadline that ends when the high bid has been provided (or ''put up'') to the seller.

Comments: SIFMA agreed that bid-wanteds must have identifiable deadlines, but disagreed that the deadline for ''around time'' bid-wanteds should be based on when the bids are ''put up'' to the seller. SIFMA suggested that the deadline for ''around time'' bid-wanteds should be defined to occur at the time the seller informs the broker's broker that the bonds should be sold to the high bidder (when the bonds are ''marked for sale''), or when the seller informs the broker's broker that the bonds will not be sold in that bid-wanted (that the bonds ''will not trade''). If neither of these events occurs in an ''around time'' bid-wanted, it should be deemed to terminate at the end of the trading day. SIFMA said that the rule as currently drafted would have a ''detrimental effect on liquidity, especially for retail customers of the broker-dealer.''

Hartfield Titus suggested restricting Draft Rule G–43(b)(v) to apply only to bid-wanteds and not to offerings. It said that current industry practices have no time limits on offerings. Hartfield Titus agreed with SIFMA that ''the deadline for accepting bids on an 'around time' item be when the bonds are marked 'FOR SALE'.''

RBI said that the imposition of a deadline could drastically deny the retail customer from receiving the highest bid available. RBI also noted that, in MSRB Notice 2011–18 (February 24, 2011), the MSRB stated that it ''believes that most retail customers would prefer a better price to a speedy trade.'' RBI agreed with this and said the imposition of an arbitrary ''deadline'' does the opposite. ''RBI believes that any deadline that is imposed upon its ability to accept bids, especially on odd-lot bid-wanted items that are being advertised as an 'around time', will be vastly detrimental to the ability of broker's brokers to provide the best price, and therefore the best execution, for the retail seller who is trying to get the best price for their municipal bonds.'' RBI also commented that the MSRB has not provided guidelines regarding the procedures that should be taken when late, high bids are returned to the broker's broker that cannot be reported to the seller because of this ''deadline.'' Like SIFMA and Hartfield Titus, RBI proposed that instead of the bid deadline ending at the time that a bid is ''put up'' to the seller, that the bid deadline should end when the bonds are marked ''for sale.''

Wolfe & Hurst objected to Draft Rule G–43(b)(v). It said that the rule currently applies to both ''sharp'' and ''around time'' deadlines. It argued that the ''requirement restricts the broker's broker from getting the best bid for its client, which will ultimately have a negative impact on smaller retail clients and the market as a whole. Wolfe & Hurst suggested that the ''rule be modified in the case of 'around time' bid-wanteds only. Specifically, where a selling dealer requests an 'around time' deadline, the broker's broker should be permitted to accept and change bids up until the point that the trade is marked for sale. Prohibiting modification at the point where the high bid is 'put up' to the seller is restricting liquidity in the market. This rule change would be detrimental to the industry.''

MSRB Response: The MSRB's principal reason for proposing Rule G–43 was to improve the pricing received by retail investors in the secondary market. Accordingly, the MSRB has modified the deadline provisions of the safe harbor to increase the likelihood of the receipt of higher prices. Under the revision, an ''around time'' deadline would end upon the earliest of: (1) the time the seller directs the broker's broker to sell the securities to the current high bidder, (2) the time the seller informs the broker's broker that the bonds will not be sold in that bid-wanted, or (3) the end of the trading day as publicly posted by the broker's broker prior to the bid-wanted. Additionally, the deadline provisions would apply only to bid-wanteds.

Draft Rule G–43(b)(vi): If the high bid received in a bid-wanted is above or below the predetermined parameters of the broker's broker and the broker's broker believes that the bid may have been submitted in error, the broker's broker may contact the bidder prior to the deadline for bids to determine whether its bid was submitted in error, without having to obtain the consent of the seller. If the high bid is not above or below the predetermined parameters but the broker's broker believes that the bid may have been submitted in error, the broker's broker must receive the permission of the seller before it may contact the bidder to determine whether its bid was submitted in error. In all events, if a bid has been changed, the broker's broker must disclose the change to the seller prior to execution and provide the seller with the original and changed bids.

Comments: Hartfield Titus suggested that there was no need to notify the seller of all changes in bids under the safe harbor and that to do so would only delay the process. It stated that such a requirement should apply only when the safe harbor was not being used.

TMC said, ''The requirement of a broker's broker to contact a seller for permission to contact a bidder, when the bid itself is within the parameters of the safe harbor is neither practical nor realistic. A selling dealer, who is acting in the best interest of its selling client, is not likely to give such approval.'' TMC also said that ''the requirement to document the communication, the original bid, and the changed bid is superfluous and an added regulatory burden.''

BDA expressed concern that ''if a broker's broker set the parameters too broadly on the upper end, erroneous bids would not be identified, the bidder would not be notified and might, in future dealings with that broker's broker, bid more conservatively or not at all. The result would be reduced liquidity in the market and lower prices for investors. Similarly, if the broker's broker set the parameters too narrowly on the lower end, the selling broker would receive a notice and quite likely not go through with the trade, or risk litigation if it did.''

Wolfe & Hurst objected to the use of predetermined parameters for bid-wanteds. It said that erroneous bids typically occur due to human error and should not be permitted to reach the marketplace as they do not reflect an accurate bid. Wolfe & Hurst also said

that ''requiring a broker's broker to obtain written permission from the seller prior to contacting the owner of an erroneous bid may result in a distortion of the market.'' It suggested that broker's brokers be allowed to inform a bidder of ''a clearly erroneous bid without the consent of the seller and without providing the same opportunity for modification to all bidders.''

MSRB Response: By definition, ''predetermined parameters'' must be designed to identify off-market bids. Broker's brokers currently compare bids to where securities have traded before with them and where they have traded most recently, as displayed on the MSRB's Electronic Municipal Market Access (EMMA®) System.[10] Some also subscribe to pricing services. Many broker's brokers already notify sellers and bidders if they think bids may be off-market. The requirement that they establish pre-determined parameters and use them to alert sellers and bidders to possible off-market bids simply incorporates current business practice in many cases. As markets move over time, the predetermined parameters of a broker's broker may cease to be effective in identifying off-market bids. That is the purpose of the periodic testing requirement.

The concept of ''predetermined parameters'' has two purposes. First, if the high bid in a bid-wanted is below the predetermined parameters, a broker's broker using the safe harbor must notify the seller of that fact, thus alerting the seller that the bid may be off market. Second, if the high bid is outside of the parameters, the broker's broker may inquire of the bidder whether its bid was in error. Considerable abuse has occurred previously when some broker's brokers signaled to bidders that they could lower their bids to be closer to cover bids. This practice resulted in less favorable prices for retail investors. Cover bids are, therefore, under the proposal not permitted to be taken into account in the pricing parameters of a broker's broker.

The MSRB has modified Proposed Rule G–43(b)(vi) to clarify that a broker's broker need only inform the seller of changes in the winning high bidder's bids and in cover bids, rather than changes to other bids. Additionally, the MSRB has clarified that the permission of a seller to contact a bidder need not be in writing, although a broker's broker must keep a written record of such communication.

Draft Rule G–43(b)(ix): If the highest bid received in a bid-wanted is below the predetermined parameters of the broker's broker, the broker's broker must disclose that fact to the seller, in which case the broker's broker may still effect the trade, if the seller acknowledges such disclosure either orally or in writing.

Comments: TMC acknowledged the MSRB's desire to limit the number of off-market trades that result from the bid-wanted process, but said that the attempt to add written communication and/or oral confirmation will greatly reduce the efficiency and accuracy of the electronic market. TMC stated that ''(t)he fallacy of the proposal lies in the belief that a single model will be sufficient for determining reasonableness.'' TMC also noted that Draft Rule G–43(b)(ix) ''still proposes that the broker's broker provide a fair price, but the Board has relaxed the requirement to include a price band.'' TMC responded that ''its tools are designed to help with a user's valuation process, not to replace the decision maker.'' TMC said that ''recognizing that volatile periods will generate the most exceptions with any model, the burdens placed on participants to record and acknowledge price levels will be unbearable.'' TMC suggested that ''a standard of reasonable care for broker's brokers should include 'reasonable' tools to help with the decision process, but the construction of a scheme to establish value in a fragmented and diffuse market seems to be more appropriate for a position taker than for an intermediary.''

BDA also said that it is not a function of a broker's broker to determine a fair price or a range of fair prices. It also noted a practical problem if the draft rule is applied to alternative trading systems (''ATSs''). BDA suggested that ''the Proposal should not be applied to ATSs, which allow for the wide and impartial distribution of bids.''

MSRB Response: The MSRB believes that the exception for certain alternative trading systems from the definition of ''broker's broker'' in the revised rule should address TMC's and BDA's concerns.

Draft Rule G–43(c)(i)(F): [A broker's broker must adopt and comply with policies and procedures pertaining to the operation of bid-wanteds and offerings, which at a minimum:] subject to the provisions of section (b) of this rule, if applicable, prohibit the broker's broker from providing any person other than the seller (which may receive all bid prices) and the winning bidder (which may receive only the price of the cover bid) with information about bid prices, until the bid-wanted or offering has been completed, unless the broker's broker makes such information available to all market participants on an equal basis at no cost, together with disclosure that any bids may not represent the fair market value of the securities, and discloses publicly that it will make such information public.

Comments: SIFMA said Draft Rule G–43(c)(i)(F) should not apply to offerings. It also requested clarification regarding when a transaction has been completed. It suggested the appropriate point in time for the purposes of this provision should be the time at which both the purchase and sale sides of the transaction have been executed.

Hartfield Titus suggested restricting Draft Rule G–43(c)(i)(F) to apply only to bid-wanteds. It said that offer and bid information on offerings should be made available to interested parties throughout the negotiation process. Hartfield Titus also suggested that a definition of when a bid-wanted is ''completed'' be any of the following: ''1) the item traded, i.e., the sell is executed and the buy is executed; 2) the item is 'Traded Away' (it was traded by the seller to another dealer or customer); and 3) the item is identified as 'No Trade' (we are told by the seller that the item will not trade).''

MSRB Response: In response to this comment, the MSRB has removed the reference to offerings in this section of the rule and proposed a definition of when a bid-wanted will be considered ''completed'' that is consistent with Hartfield Titus' request.

Draft Rule G–43(c)(i)(G): [A broker's broker must adopt and comply with policies and procedures pertaining to the operation of bid-wanteds and offerings, which at a minimum:] if a broker's broker has customers, provide for the disclosure of that fact to both sellers and bidders in writing and provide for the disclosure to the seller if the high bid in a bid-wanted or offering is from a customer of the broker's broker.

Comments: Hartfield Titus suggested that generally disclosing that it has customers would be a sufficient way to inform its clients instead of telling them on a transaction-by-transaction basis. A general statement would help the broker's broker keep anonymity in its brokering services while informing its clients that it also brokers with sophisticated municipal market professionals.

TMC supported the notion that brokers' brokers should prominently disclose the types of firms that constitute its client base but does not agree with disclosing to a seller information about the buyer of an item at the time of trade stating this to be

[10] EMMA® is a registered trademark of the MSRB.

''unfair and against the anonymous nature of the broker's market.'' TMC said that ''[a]nonymity is an extremely important component of the utility of an intermediary (either a voice broker or an ATS) in the municipal market.'' It said that ''[a]ny regulatory requirement that would serve to compromise anonymity would be a negative development for a market that has always given participants ways to protect their identities.''

MSRB Response: The role of the broker's broker has traditionally been that of an intermediary, and the MSRB has previously said that a broker's broker has a special relationship with other dealers. Therefore, the MSRB continues to be of the view that a broker's broker should make it known to a seller if it has customers and if the high bid in a bid-wanted or offering is from a customer of the broker's broker. The MSRB has, however, modified the draft rule to clarify that the broker's broker need not disclose the name of its customer. The MSRB believes that the same concerns would exist if an affiliate of a broker's broker could bid in a bid-wanted or offering and has added comparable provisions concerning affiliates.

Draft Rule G–43(c)(i)(H): [A broker's broker must adopt and comply with policies and procedures pertaining to the operation of bid-wanteds and offerings, which at a minimum:] if the broker's broker wishes to conduct a bid-wanted in accordance with section (b) of this rule, require the broker's broker to adopt predetermined parameters for such bid-wanted, disclose such predetermined parameters in advance of the bid-wanted in which they are used, and periodically test such predetermined parameters to determine whether they have identified most bids that did not represent the fair market value of municipal securities that were the subject of bid-wanteds to which the predetermined parameters were applied.

Comments: BDA said that the requirement that the parameters be tested periodically is problematic. It stated that Draft Rule G–43(c)(i)(H) is not clear regarding what constitutes a successful test. ''If no bids exceeded the parameters, is that an indication that the parameters are correct? Or that they are too broadly set? Or does it say something about the bids.''

TMC said that ''providing users with useful market and security specific tools should suffice to satisfy the Board's desire to improve bid quality. If a firm uses the same systematic approach for each posted bid-wanted and has a set of tools that helps traders establish value, then there should be no need for a safe harbor.''

MSRB Response: If many trades were occurring at prices outside the parameters, that would be an indication that the parameters should be adjusted. A broker's broker could adjust its predetermined parameters as frequently as it considered necessary to adapt to changing markets, as long as the new parameters were disclosed in advance of use and not made applicable to bid-wanteds already under way.

Draft Rule G–43(d)(iii): ''Broker's broker'' means a dealer, or a separately operated and supervised division or unit of a dealer, that principally effects transactions for other dealers or that holds itself out as a broker's broker. A broker's broker may be a separate company or part of a larger company.

Comments: Knight BondPoint requested that the draft definition of a broker's broker be revised to clarify that ''ATS operators whose platforms operate in a manner in which subscribers electronically disseminate their bids and offers broadly to other subscribers and electronically interact with such bids and offers to consummate transactions, and which offer subscribers an automated, systematic and non-discretionary platform to conduct their bids wanted auctions—are not broker's brokers for purposes of this rule.''

BDA argued that the inclusion of ATSs within the definition of broker's broker is not warranted.

Wolfe & Hurst suggested a more detailed definition of broker's broker to include the nature and role of a broker's broker as well as the duties and responsibilities of a broker's broker. It argued that this would eliminate the need to include the phrase, ''or that holds itself out as a broker's broker'' in Draft Rule G–43(d)(iii).

TMC said that the language in Draft Rule G–43(d)(iii) on whether a firm ''holds itself out as a broker's broker'' discourages dealers from competitive (''in-comp'') bidding. TMC requested clarification regarding the following questions: (1) As a dealer's business is not usually ''principally effecting transactions for other dealers'' but for its client, would a broker-dealer be exempt from the definition or is acting like a broker's broker the equivalent of ''holds itself out as a broker's broker?'' (2) Many dealers post the same bid-wanted with multiple broker's brokers. Does the use of multiple broker's brokers create an unfair practice with respect to G–17? (3) If a dealer uses multiple brokers, should that be disclosed to the broker so that the broker can disclose that fact to potential bidders? (4) If the same bond is out for the bid with multiple broker's brokers, and the bond can only trade once, would that be viewed negatively by the regulators, barring disclosure to the marketplace? (5) If a broker's broker receives a bid-wanted that has been posted to multiple firms, does the broker need to use the same level of care as if the item were for its own account?

MSRB Response: This proposal would not require selling dealers to keep any records or discourage competitive bidding. It also would not prevent a selling dealer from posting bid-wanteds with multiple firms. The portion of the Proposed Notice on price discovery concerns a practice of some dealers of using broker's brokers to gauge the market price of securities so that they themselves may purchase the securities rather than trading them at the high bids obtained by broker's brokers. The pricing duty of a broker's broker does not depend upon whether the selling dealer has posted the bid-wanted with multiple broker's brokers.

The MSRB continues to be of the view that a function-based definition of ''broker's broker'' is appropriate, rather than a detailed list such as that proposed by Wolfe & Hurst.

The MSRB has determined that it is appropriate to except certain alternative trading systems from the definition of ''broker's broker,'' because they do not engage in the types of voice communications that have led to abuses in the past. Nevertheless, in order to qualify for the exception, under Proposed Rule G–43(d)(iii) such systems would be subject to the same prohibitions on abusive behavior to which a broker's broker would be subject.

Miscellaneous

Comments: SIFMA said that the restrictions on control of bid-wanteds by the selling dealers in the draft interpretive notice are unreasonably restrictive. It suggested that ''an appropriate standard would be to allow selling dealers discretion to control this aspect of bid-wanteds so long as they could demonstrate that any restrictions imposed were intended to benefit the selling customer, and were not intended to solely benefit the selling dealer.''

MSRB Response: The MSRB is concerned that the standard for permissible screening suggested by SIFMA would be difficult to employ and to enforce. It also has the potential for resulting in a less favorable price for the customer than had the screening not occurred. Moreover, if a selling dealer's customer were to request expressly that the dealer screen certain bidders from the bid-wanted or offering for its

securities, such screening would not be requested for competitive reasons.

Comments: Mr. Dolan asked whether a broker-dealer using an electronic platform is permitted to screen its competitor's bonds from the platform, thereby encouraging its customers to purchase securities from the dealer's inventory (i.e., whether the MSRB had a best execution rule).

MSRB Response: The MSRB is concerned that certain dealers may be refusing to show their customers municipal securities offered by their competitors at more favorable prices than those the dealers place on the same securities in their inventory. At this time, the MSRB has no best execution rule comparable to that of the Financial Industry Regulatory Authority. As long as the price paid by the customer is fair and reasonable, there is no requirement under MSRB rules that a dealer seek out the most favorable price for its customer. The MSRB will take this comment under advisement as it continues to review its rules.

Comments: Vista Securities asked, ''If there is a material change in the description of a bond being advertised for the bid, * * * is not the item as incorrectly advertised simply invalid and any bids null and void? As opposed to the broker's broker not being 'prohibited' from notifying all bidders about material changes in a bid-wanted item, should not the broker's broker be obliged to notify all bidders that the item was incorrectly described, all bids are void, and have the seller resubmit the item for the bid if the seller so chooses? Can a potential buyer of any security, municipal or otherwise, be held to his/her bid if the security is advertised incorrectly in a material way? If an intermediary in the transaction becomes aware of the problem, should not the intermediary be obliged to halt the process?''

MSRB Response: If a broker's broker learned of material changes in a bid-wanted item it would be required by MSRB Rule G–17 to notify all bidders and accept changed bids.

Draft Rule G–8(a)(xxv)(A): [A broker's broker (as defined in Rule G–43(d)(iii)) shall maintain the following records:] (A) All bids to purchase municipal securities, and offers to sell municipal securities, that it receives, together with the time of receipt.

Comments: SIFMA said that the requirements under Draft Rule G–8(a)(xxv)(A) are not workable or necessary for offerings. It said that applying this requirement will impose a significant recordkeeping burden on broker's brokers, and is not warranted. It requested clarification if Draft Rule G–8(a)(xxv)(A) is intended to apply only to the initial time an offering is given to a broker's broker.

Hartfield Titus said that the majority of negotiations on municipal offerings are performed through ''voice brokering.'' Price may change many times. It suggested that the time and price record be limited to when the offering is first received, when it is updated for display or distribution, and displaying the offering as it was given to the brokers' broker or updated, by the seller. Hartfield Titus also said that there should be no requirement to record the reason.

RBI agreed that the requirements are reasonable for bid-wanteds, but said they are not workable or necessary for offerings. Negotiated offerings involve back and forth communications between a potential buyer and seller, not always resulting in a trade. RBI said the requirement would impose a significant recordkeeping burden on broker's brokers while adding no significant compliance benefits.

MSRB Response: The MSRB agrees with the comments concerning records of offers and has amended the rule to require that a broker's brokers' records concerning offers must include the time of first receipt and the time the offering has been updated for display or distribution.

Draft Rule G–8(a)(xxv)(E)–(F): [A broker's broker (as defined in Draft Rule G–43(d)(iii)) shall maintain the following records:]

(E) *For all changed bids, the full name of the person at the bidder firm that authorized the change; the reason given for the change in bid; and the full name of the person at the broker's broker at whose direction the change was made;*

(F) For all changed offers, the full name of the person at the seller firm that authorized the change; the reason given for the change in offering price; and the full name of the person at the broker's broker at whose direction the change was made.

Comments: Wolfe & Hurst said that the ''recordkeeping requirements as set forth in the draft rule are overly burdensome to broker's brokers and would cause unnecessary delay and inefficiency in the market.''

TMC said that ''[r]equiring brokers' brokers to document price changes would be of no value to the market, as traders know that offering prices are always subject to change.'' It also added that ''documenting tens of thousands of price changes on a daily basis would be cost prohibitive.''

MSRB Response: The requirement that a record of the reason for a change in bid or offering price has been eliminated. However, the remaining recordkeeping requirements have not been modified. Many were suggested by broker's brokers themselves, and good records are essential for enforcement of Proposed Rule G–43.

The MSRB issued two other requests for comment on the regulation of broker's brokers prior to the request for comment described above. On September 9, 2010, the MSRB published ''Request for Comment on MSRB Guidance on Broker's Brokers'' (''MSRB Notice 2010–35''). In MSRB Notice 2010–35, the MSRB requested comment on an interpretive notice reviewing the fair pricing requirements of MSRB Rules G–18 and G–30 and the fair practice requirements of MSRB Rule G–17 as they applied to transactions effected by broker's brokers. It also proposed to discuss the recordkeeping and record retention requirements for broker's brokers. On February 24, 2011, the MSRB published ''Request for Comment on Draft Broker's Brokers Rule (Rule G–43) and Associated Recordkeeping and Transaction Amendments'' (''MSRB Notice 2011–18''). In MSRB Notice 2011–18, the MSRB requested comment on the original version of Draft Rule G–43 (on broker's brokers), as well as associated draft amendments to Rule G–8 (on books and records), G–9 (on records preservation), and G–18 (on execution of transactions). Copies of MSRB Notices 2010–35 and 2011–18 and associated comment letters are included in Attachment 2 hereto. Each subsequent request for comment has included a summary of the comments received on the previous request for comment, as well as the MSRB's responses to those comments.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 45 days of the date of publication of this notice in the **Federal Register** or within such longer period (i) as the Commission may designate up to 90 days of such date if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the self-regulatory organization consents, the Commission will:

(A) By order approve or disapprove such proposed rule change, or

(B) Institute proceedings to determine whether the proposed rule change should be disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule

change is consistent with the Exchange Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR–MSRB–2012–04 on the subject line.

Paper Comments

- Send paper comments in triplicate to Elizabeth M. Murphy, Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–MSRB–2012–04. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Web site *(http://www.sec.gov/rules/sro.shtml).* Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549, on official business days between the hours of 10 a.m. and 3 p.m. Copies of such filing also will be available for inspection and copying at the MSRB's offices. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–MSRB–2012–04 and should be submitted on or before April 16, 2012.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[11]

Kevin M. O'Neill,

Deputy Secretary.

[FR Doc. 2012–7133 Filed 3–23–12; 8:45 am]

BILLING CODE 8011–01–P

[11] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–66622, File No. SR–MSRB–2012–01]

Self-Regulatory Organizations; Municipal Securities Rulemaking Board; Order Granting Approval of Amendments to Rule G–14, on Reports of Sales or Purchases, Including the Rule G–14 RTRS Procedures, and Amendments to the Real-Time Transaction Reporting System

March 20, 2012.

I. Introduction

On January 20, 2012, the Municipal Securities Rulemaking Board (''MSRB'') filed with the Securities and Exchange Commission (''SEC'' or ''Commission''), pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Exchange Act''),[1] and Rule 19b–4 thereunder,[2] a proposed rule change consisting of amendments to Rule G–14, Reports of Sales or Purchases, including the Rule G–14 RTRS Procedures, and amendments to the Real-Time Transaction Reporting System. The proposed rule change was published for comment in the **Federal Register** on February 8, 2012.[3] The Commission received no comments on the proposed rule change. This order approves the proposed rule change.

II. Background and Description of Proposal

The proposed rule change consists of amendments to Rule G–14, Reports of Sales or Purchases, including the Rule G–14 RTRS Procedures, and amendments to the Real-Time Transaction Reporting System (''RTRS'') information system and subscription service (the ''RTRS Facility''; collectively, ''proposed rule change''). The proposed changes to Rule G–14 would remove certain outdated information. The proposed changes to the RTRS Facility would (A) remove certain outdated information and amend certain definitions to reflect current system operating hours and business days; (B) add an RTRS-calculated yield to the information disseminated for inter-dealer transactions; (C) remove certain infrequently used data reporting requirements; (D) require dealers to submit dollar prices for certain trades; and (E) reduce the number of customer trades suppressed from dissemination because of potentially erroneous price/yield calculations. The MSRB proposes that the proposed rule change be implemented in three phases, as further described herein.

Amendments to Rule G–14, on Reports of Sales or Purchases, and Rule G–14 RTRS Procedures. MSRB Rule G–14 requires brokers, dealers, and municipal securities dealers (collectively, ''dealers'') to report certain information about each purchase and sale transaction effected in municipal securities to RTRS. Such transaction information is made available to the public, the SEC, the Financial Industry Regulatory Authority (''FINRA'') and certain federal bank regulatory agencies to assist in the inspection for compliance with and enforcement of MSRB rules. The reporting requirements are further outlined in Rule G–14 RTRS Procedures and the RTRS Users Manual.[4]

The proposed rule change would amend Rule G–14 and the Rule G–14 RTRS Procedures to update certain references (such as references to the National Association of Securities Dealers, the predecessor of FINRA); eliminate certain provisions that are no longer relevant (such as provisions relating to testing during the original RTRS start-up period) or that, by their original terms, have expired; and conform terms in certain definitions.

Amendments to the RTRS Facility. The RTRS Facility provides for the collection and dissemination of information about transactions occurring in the municipal securities market, and requires dealers to submit information about each purchase and sale transaction effected in municipal securities. The proposed rule change would (A) remove certain outdated information and reporting requirements and amend certain definitions to reflect current system operating hours and business days; (B) modify RTRS specifications to perform certain yield calculations for inter-dealer transactions; (C) remove certain infrequently used data reporting requirements; (D) require dealers to submit dollar prices for certain trades; and (E) modify RTRS specifications to reduce the number of trades suppressed from dissemination because of erroneous price and yield calculations.

Remove certain outdated information and conform definitions to reflect current system operating hours and business days. The proposed rule

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] *See* Securities Exchange Act Release No. 66309 (February 2, 2012), 77 FR 6615.

[4] Rule G–14 RTRS Procedures are included in the text of MSRB Rule G–14, and the RTRS Users Manual is available on the MSRB Web site at *www.msrb.org.* The RTRS Users Manual will be revised as necessary to reflect the changes made by the proposed rule change.

change would remove references throughout the text of the RTRS Facility to prior amendments to Rule G–14, to certain testing requirements and to the implementation plan relevant to the initial phases of the RTRS system; update current hours of operation; conform certain definitions to reflect such change; and make non-substantive revisions to the language of certain portions of the RTRS Facility to reflect the passage of time since its initial approval.

Yields on inter-dealer transactions. Inter-dealer transaction reporting is accomplished by both the purchasing and selling dealers submitting information about the transaction to the DTCC's real-time trade matching system (''RTTM''). Information submitted to RTTM is forwarded to RTRS for trade reporting. For most inter-dealer transactions, dealers report final money, par amount and accrued interest to RTTM—as opposed to a dollar price and yield [5] as is done for customer trades—and RTRS computes a dollar price from these values for inter-dealer transaction price dissemination.[6] Currently, RTRS does not compute a corresponding yield from the RTRS-computed dollar price for dissemination, resulting in a disparity between what is disseminated for inter-dealer and customer transactions.

To facilitate yield-based comparisons of transaction data across securities, the proposed rule change would cause RTRS to be reprogrammed to perform this calculation so that a yield for most inter-dealer transactions would be added to the information disseminated from RTRS, thereby improving the usefulness of the inter-dealer data disseminated to subscribers and displayed on the MSRB's Electronic Municipal Market Access (EMMA®) Web site.[7] Since EMMA® is a subscriber to the RTRS real-time subscription service, the yield disseminated for inter-dealer transactions also would be displayed on EMMA® in the same manner as it would be provided to RTRS subscribers.[8] This amendment to the RTRS Facility is reflected in the changes under the heading ''Price Dissemination by RTRS—List of Information Items to be Disseminated'' and ''MSRB Real-Time Transaction Data Subscription Service—Description—Transaction Data Disseminated—Yield (if applicable),'' and conforming changes to the RTRS Users Manual will be made.

Transaction reporting requirements. MSRB rules on transaction reporting contain two requirements that were included in the original design for RTRS in 2005 to provide additional details about certain transactions for use in market surveillance. These requirements have applied to few transactions, yet continue to generate questions from dealers, and have provided only limited value for use in market surveillance. The proposed rule change would revise the RTRS specifications to remove these requirements.

The first of these two requirements relates to inter-dealer transactions and requires the identity of an ''intermediate dealer,'' or correspondent of a clearing broker that passes data to the clearing broker about transactions effected by a third dealer (''effecting dealer''), to be included on applicable trade reports. One of the original purposes of having the intermediate dealer included in a trade report was to assist market surveillance staff by having an additional dealer associated with a transaction reported in the event that the effecting dealer's identity was erroneously reported. However, few transaction reports contain such an intermediate dealer and, since the November 2009 enhancement to transaction reporting to add the effecting broker to the matching criteria in RTTM, the identity of the effecting dealer is rarely, if ever, erroneous. The proposed rule change would delete the requirement for dealers to identify the intermediate dealer. This amendment to the RTRS Facility is reflected by the deletion of the penultimate paragraph under the heading ''RTRS Facility—Enhancement of Information Available to Regulators,'' and conforming changes to the RTRS Users Manual will be made.

The second requirement applies to any transaction effected at a price that substantially differs from the market price as a result of the parties to the transaction agreeing to significantly deviate from a normal settlement cycle. For such transactions, dealers are required to include an identifier on the trade report that allows the trade report to be entered into the RTRS audit trail yet suppressed from price dissemination. Since a small number of transactions are reported with this identifier, for example only .01% of trade reports were identified with this indicator in August 2011, these transactions could be reported using the generic ''away from market'' indicator used for reporting any transaction at a price that differs from the current market price for the security to simplify transaction reporting requirements. Thus, concurrently with the elimination of the intermediate dealer reporting requirement, the RTRS Users Manual would be revised to delete the ''away from market—extraordinary settlement'' special condition indicator from RTRS and require that such transactions be reported using the generic ''away from market'' indicator.

Reporting dollar price for all inter-dealer transactions. RTRS currently computes a dollar price for inter-dealer transactions using the final money, par amount and accrued interest submitted to DTCC. Since the information reported for inter-dealer transactions also is used by DTCC for purposes of clearance and settlement, DTCC procedures require dealers to report par value as an expression of the number of bonds traded as opposed to the actual par amount traded. If the par value of a security is no longer a $1,000 multiple because, for example, the issuer has prepaid a portion of the principal on a security on a pro rata basis, dealers continue to report for inter-dealer transactions par value expressed as the number of bonds (i.e. ten bonds would be reported as $10,000 par value). Transactions between dealers in this security would result in erroneous RTRS-calculated dollar prices since the final money reported by the dealers would be based on a transaction in a security for which each bond costs less than $1,000.[9]

Since MSRB transaction reporting for inter-dealer transactions began in 1994, a very small portion of inter-dealer transactions have been in securities with a non-standard $1,000 par

[5] Dollar price and yield on customer transactions are required to be computed in the same manner as required under MSRB Rule G–15(a), on customer confirmations. Accordingly, from the transaction dollar price, dealers report yield calculated to the lower of an in-whole call feature or maturity.

[6] For transactions in new issue securities traded on a when, as and if issued basis prior to the closing date being known, dealers only report a dollar price or yield since a final money and accrued interest calculation cannot be performed.

[7] In addition to calculating and disseminating yield for future inter-dealer transactions, amendments to RTRS specifications would calculate and disseminate yields for historical inter-dealer transactions in RTRS to the extent that such calculations can be accurately performed.

[8] Since the RTRS subscription service already includes a field for yield, no significant system changes should be necessary for existing RTRS subscribers to receive yields on inter-dealer transactions.

[9] For example, if an issuer has prepaid 50% of the principal on a $1,000 denominated security, each bond would cost $500 so a transaction of 10 bonds at ''par'' would be reported with a par value of $10,000 and final money of $5,000 resulting in an RTRS-computed dollar price of $50. This anomaly only occurs on inter-dealer transactions since customer transactions are reported with a dollar price and yield. In this example, the dollar price on a customer transaction in this security would be reported as $100, or 100% of the principal amount.

multiple.[10] However, primarily since many Build America Bonds issued in recent years included partial call features with a pro-rata redemption provision, there is a likelihood that many more securities may contain par values that are no longer $1,000 multiples. In addition, there have been press reports that more securities may be issued in nontraditional denominations, such as securities issued in $25 par amounts similar to preferred stock and other ''mini bonds'' with sub-$1,000 principal values.

To ensure that the dollar price disseminated for inter-dealer transactions remains accurate and to minimize the impact on dealer operations as well as the clearance and settlement use of the data submitted to DTCC, the MSRB proposes to require dealers to report—in addition to the information currently reported for inter-dealer transactions—the contractual dollar price at which the transaction was executed.[11] This amendment to the RTRS Facility is reflected in the changes under the heading ''MSRB Real-Time Transaction Data Subscription Service—Description—Transaction Data Disseminated—Dollar Price,'' and conforming changes to the RTRS Users Manual will be made.

Increase dissemination of customer transactions. As described above, dealer reports of customer transactions include both a dollar price and yield. Depending on whether the transaction was executed on the basis of a dollar price or yield, a corresponding value must be computed and reported to RTRS by the dealer consistent with the customer confirmation requirements so that the corresponding value reflects a value to the lower of an in-whole call feature or maturity. RTRS also computes the dollar price from the reported yield on customer transactions using security descriptive information from the RTRS security master as a data quality check to ensure that the reported information is accurate. Currently, this data quality check returns an error to dealers and suppresses the transaction from being disseminated in the event that the dollar price computed by RTRS does not exactly match the dollar price reported by the dealer. Dealers receiving this error are required to review the information reported and, if incorrect, modify the transaction information in RTRS. However, in some cases, dealers submit correct information yet RTRS computes an erroneous dollar price as a result of an error in the security descriptive information used by RTRS.[12]

In 2010, of those trades receiving this error, over 75% of the reported dollar prices disagreed with the RTRS-calculated dollar price by less than one dollar. To increase the number of customer transactions disseminated, the proposed rule change would cause RTRS to be reprogrammed to adjust the tolerance of the error code so that the error would continue to be returned to dealers for customer transactions where the reported dollar price disagrees with the RTRS calculated price but allow the trade report to be disseminated so long as the dealer and RTRS-calculated dollar prices are within $1 of each other. Further, since the disseminated dollar price would be unable to be exactly verified, RTRS would also be programmed to include with the disseminated trade report an indicator that the dollar price of these trades was unable to be verified. Thus, concurrently with the amendment to require dollar price reporting for all inter-dealer transactions, the RTRS Users Manual would be revised to reflect these changes in programming.

Phased Effective Dates of Proposed Rule Change. The MSRB proposes that the proposed rule change be implemented in three phases. Those changes to Rule G–14, the Rule G–14 RTRS Procedures, and the RTRS Facility removing outdated provisions and amending certain definitions, as described above under the caption ''Amendments to the RTRS Facility—Remove certain outdated information and conform definitions to reflect current system operating hours and business days'', would be made effective upon approval by the SEC. Those changes to the RTRS Facility not requiring dealers to perform significant system changes, as described above under the captions ''Amendments to the RTRS Facility—Yields on inter-dealer transactions'' and ''Amendments to the RTRS Facility—Transaction reporting requirements'', would be made effective on April 30, 2012. Those changes to the RTRS Facility requiring dealers and subscribers to the RTRS subscription service to make significant system changes, as described above under the captions ''Amendments to the RTRS Facility—Reporting dollar price for all inter-dealer transactions'' and ''Amendments to the RTRS Facility—Increase dissemination of customer transactions'', would be made effective on a date to be announced by the MSRB in a notice published on the MSRB Web site, which date shall be no later than November 30, 2012 and shall be announced no later than 30 days prior to the effective date thereof.

III. Discussion and Commission Findings

The Commission has carefully considered the proposed rule change and finds that the proposed rule change is consistent with the requirements of the Exchange Act and the rules and regulations thereunder applicable to the MSRB.[13] In particular, the proposed rule change is consistent with Section 15B(b)(2)(C) of the Exchange Act, which provides that the MSRB's rules shall be designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in municipal securities and municipal financial products, to remove impediments to and perfect the mechanism of a free and open market in municipal securities and municipal financial products, and, in general, to protect investors, municipal entities, obligated persons, and the public interest.[14]

The Commission believes that the proposed rule change is consistent with the Exchange Act because the proposed rule change would remove impediments to and perfect the mechanism of a free and open market in municipal securities by improving trade reporting and market transparency. The proposed rule change would facilitate comparison of trade data across securities and within data for a security, thereby contributing to fairer pricing, improve the reliability and accuracy of price information disseminated for inter-dealer

[10] Historically, this problem primarily has been limited to transactions in certain municipal collateralized mortgage obligations.

[11] For data quality purposes, RTRS would compare the buy and sell-side contractual dollar prices and return errors to dealers in the event of a material difference between the two reported dollar prices and continue to calculate a dollar price from the reported final money, par value and accrued interest. Since the dealer reported dollar price would not be used for clearance or settlement at DTCC, this data field would be able to be modified in RTRS by dealers to correct errors, even after trade matching had occurred. In the event that the dollar prices disagree between dealers, RTRS would disseminate the RTRS-calculated dollar price and if the dealer reported dollar prices agree yet differ from the RTRS-calculated dollar price (which would occur if the security par value is no longer a $1,000 multiple) RTRS would disseminate the dealer reported dollar price.

[12] In these cases, there is no action the dealer can take to disseminate the trade report and, to ensure the integrity of RTRS, the MSRB does not manually manipulate trade data or security descriptive information to cause the trade to meet the criteria of the error code.

[13] In approving this proposed rule change, the Commission notes that it has considered the proposed rule's impact on efficiency, competition and capital formation. 15 U.S.C. 78c(f).

[14] 15 U.S.C. 78*o*–4(b)(2)(C).

transactions, and increase the number of customer transactions disseminated to the market. The Commission believes that these changes would contribute to the MSRB's continuing efforts to improve market transparency and to protect investors and the public interest.

IV. Conclusion

It is therefore ordered, pursuant to Section 19(b)(2) of the Exchange Act,[15] that the proposed rule change (SR–MSRB–2012–01) be, and it hereby is, approved.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[16]

Kevin M. O'Neill,

Deputy Secretary.

[FR Doc. 2012–7132 Filed 3–23–12; 8:45 am]

BILLING CODE 8011–01–P

SMALL BUSINESS ADMINISTRATION

[Disaster Declaration #13041 and #13042]

Missouri Disaster #MO–00057

AGENCY: Small Business Administration.

ACTION: Notice.

SUMMARY: This is a notice of an Administrative declaration of a disaster for the State of Missouri dated 03/15/2012.

Incident: Severe Storms, Tornadoes, Hail, High Winds, Heavy Rain, and Flooding.

Incident Period: 02/28/2012 through 03/01/2012.

DATES: *Effective Date:* 03/15/2012.

Physical Loan Application Deadline Date: 05/14/2012.

Economic Injury (Eidl) Loan Application Deadline Date: 12/17/2012.

ADDRESSES: Submit completed loan applications to: U.S. Small Business Administration, Processing and Disbursement Center, 14925 Kingsport Road, Fort Worth, TX 76155.

FOR FURTHER INFORMATION CONTACT: A. Escobar, Office of Disaster Assistance, U.S. Small Business Administration, 409 3rd Street SW., Suite 6050, Washington, DC 20416.

SUPPLEMENTARY INFORMATION: Notice is hereby given that as a result of the Administrator's disaster declaration, applications for disaster loans may be filed at the address listed above or other locally announced locations.

The following areas have been determined to be adversely affected by the disaster:

Primary Counties: Dallas, Stone, Taney.

Contiguous Counties:

Missouri: Barry, Camden, Christian, Douglas, Greene, Hickory, Laclede, Lawrence, Ozark, Polk, Webster.

Arkansas: Boone, Carroll, Marion.

The Interest Rates are:

	Percent
For Physical Damage:	
Homeowners with Credit Available Elsewhere	3.750
Homeowners without Credit Available Elsewhere	1.875
Businesses with Credit Available Elsewhere	6.000
Businesses without Credit Available Elsewhere	4.000
Non-profit Organizations with Credit Available Elsewhere	3.125
Non-profit Organizations without Credit Available Elsewhere	3.000
For Economic Injury:	
Businesses & Small Agricultural Cooperatives without Credit Available Elsewhere	4.000
Non-profit Organizations without Credit Available Elsewhere	3.000

The number assigned to this disaster for physical damage is 13041B and for economic injury is 130420.

The States which received an EIDL Declaration # are Missouri, Arkansas.

(Catalog of Federal Domestic Assistance Numbers 59002 and 59008)

Dated: March 15, 2012.

Karen G. Mills,

Administrator.

[FR Doc. 2012–7112 Filed 3–23–12; 8:45 am]

BILLING CODE 8025–01–P

SMALL BUSINESS ADMINISTRATION

[Disaster Declaration #13050 and #13051]

Kentucky Disaster #KY–00045

AGENCY: Small Business Administration.

ACTION: Notice.

SUMMARY: This is a Notice of the Presidential declaration of a major disaster for Public Assistance Only for the Commonwealth of Kentucky (FEMA–4057–DR), dated 03/16/2012.

Incident: Severe Storms, Tornadoes, Straight-line Winds, and Flooding.

Incident Period: 02/29/2012 through 03/03/2012.

DATES: *Effective Date:* 03/16/2012.

Physical Loan Application Deadline Date: 05/15/2012.

Economic Injury (EIDL) Loan Application Deadline Date: 12/17/2012.

ADDRESSES: Submit completed loan applications to: U.S. Small Business Administration, Processing and Disbursement Center, 14925 Kingsport Road, Fort Worth, TX 76155.

FOR FURTHER INFORMATION CONTACT: A. Escobar, Office of Disaster Assistance, U.S. Small Business Administration, 409 3rd Street SW., Suite 6050, Washington, DC 20416

SUPPLEMENTARY INFORMATION: Notice is hereby given that as a result of the President's major disaster declaration on 03/16/2012, Private Non-Profit organizations that provide essential services of governmental nature may file disaster loan applications at the address listed above or other locally announced locations.

The following areas have been determined to be adversely affected by the disaster:

Primary Counties: Grant, Laurel, Lawrence, Magoffin, Martin, Menifee, Morgan.

The Interest Rates are:

	Percent
For Physical Damage:	
Non-Profit Organizations With Credit Available Elsewhere	3.125
Non-Profit Organizations Without Credit Available Elsewhere	3.000
For Economic Injury:	
Non-Profit Organizations Without Credit Available Elsewhere	3.000

The number assigned to this disaster for physical damage is 13050C and for economic injury is 13051C.

(Catalog of Federal Domestic Assistance Numbers 59002 and 59008)

James E. Rivera,

Associate Administrator for Disaster Assistance.

[FR Doc. 2012–7109 Filed 3–23–12; 8:45 am]

BILLING CODE 8025–01–P

SMALL BUSINESS ADMINISTRATION

[Disaster Declaration #13048 and #13049]

Tennessee Disaster #TN–00063

AGENCY: Small Business Administration.

ACTION: Notice.

SUMMARY: This is a Notice of the Presidential declaration of a major disaster for the State of Tennessee (FEMA–4060–DR), dated 03/16/2012.

Incident: Severe Storms, Tornadoes, Straight-line Winds, and Flooding.

Incident Period: 02/29/2012 through 03/02/2012.

DATES: *Effective Date:* 03/16/2012.

Physical Loan Application Deadline Date: 05/15/2012.

Economic Injury (EIDL) Loan Application Deadline Date: 12/17/2012.

[15] 15 U.S.C. 78s(b)(2).

[16] 17 CFR 200.30–3(a)(12).

ADDRESSES: Submit completed loan applications to: U.S. Small Business Administration, Processing and Disbursement Center, 14925 Kingsport Road, Fort Worth, TX 76155.

FOR FURTHER INFORMATION CONTACT: A. Escobar, Office of Disaster Assistance, U.S. Small Business Administration, 409 3rd Street SW., Suite 6050, Washington, DC 20416.

SUPPLEMENTARY INFORMATION: Notice is hereby given that as a result of the President's major disaster declaration on 03/16/2012, applications for disaster loans may be filed at the address listed above or other locally announced locations.

The following areas have been determined to be adversely affected by the disaster:

Primary Counties (Physical Damage and Economic Injury Loans): Bradley, Claiborne, Cumberland, Dekalb, Hamilton, Jackson, Mcminn, Monroe, Overton, Polk.

Contiguous Counties (Economic Injury Loans Only):

Tennessee: Bledsoe, Blount, Campbell, Cannon, Clay, Fentress, Grainger, Hancock, Loudon, Macon, Marion, Meigs, Morgan, Pickett, Putnam, Rhea, Roane, Sequatchie, Smith, Union, Van Buren, Warren, White, Wilson.

Georgia: Catoosa, Dade, Fannin, Murray, Walker, Whitfield.

Kentucky: Bell, Whitley.

North Carolina: Cherokee, Graham.

Virginia: Lee.

The Interest Rates are:

	Percent
For Physical Damage:	
Homeowners With Credit Available Elsewhere	3.750
Homeowners Without Credit Available Elsewhere	1.875
Businesses With Credit Available Elsewhere	6.000
Businesses Without Credit Available Elsewhere	4.000
Non-Profit Organizations With Credit Available Elsewhere	3.125
Non-Profit Organizations Without Credit Available Elsewhere	3.000
For Economic Injury:	
Businesses & Small Agricultural Cooperatives Without Credit Available Elsewhere	4.000
Non-Profit Organizations Without Credit Available Elsewhere	3.000

The number assigned to this disaster for physical damage is 13048C and for economic injury is 130490.

(Catalog of Federal Domestic Assistance Numbers 59002 and 59008)

James E. Rivera,

Associate Administrator for Disaster Assistance.

[FR Doc. 2012–7108 Filed 3–23–12; 8:45 am]

BILLING CODE 8025–01–P

SMALL BUSINESS ADMINISTRATION

[Disaster Declaration #13044 and #13045]

West Virginia Disaster #WV–00023

AGENCY: Small Business Administration.

ACTION: Notice.

SUMMARY: This is a Notice of the Presidential declaration of a major disaster for the State of West Virginia (FEMA–4059–DR), dated 03/16/2012.

Incident: Severe Storms, Tornadoes, Flooding, Mudslides, and Landslides.

Incident Period: 02/29/2012 through 03/05/2012.

DATES: *Effective Date:* 03/16/2012.

Physical Loan Application Deadline Date: 05/15/2012.

Economic Injury (Eidl) Loan Application Deadline Date: 12/17/2012.

ADDRESSES: Submit completed loan applications to: U.S. Small Business Administration, Processing and Disbursement Center, 14925 Kingsport Road, Fort Worth, TX 76155.

FOR FURTHER INFORMATION CONTACT: A. Escobar, Office of Disaster Assistance, U.S. Small Business Administration, 409 3rd Street SW., Suite 6050, Washington, DC 20416.

SUPPLEMENTARY INFORMATION: Notice is hereby given that as a result of the President's major disaster declaration on 03/16/2012, applications for disaster loans may be filed at the address listed above or other locally announced locations.

The following areas have been determined to be adversely affected by the disaster:

Primary Counties (Physical Damage and Economic Injury Loans): Lincoln, Marion, Wayne.

Contiguous Counties (Economic Injury Loans Only):

West Virginia: Boone, Cabell, Harrison, Kanawha, Logan, Mingo, Monongalia, Putnam, Taylor, Wetzel.

Kentucky: Boyd, Lawrence, Martin.

Ohio: Lawrence.

The Interest Rates are:

	Percent
For Physical Damage:	
Homeowners with Credit Available Elsewhere	3.750
Homeowners without Credit Available Elsewhere	1.875
Businesses with Credit Available Elsewhere	6.000
Businesses without Credit Available Elsewhere	4.000
Non-profit Organizations with Credit Available Elsewhere	3.125
Non-profit Organizations without Credit Available Elsewhere	3.000
For Economic Injury:	
Businesses & Small Agricultural Cooperatives without Credit Available Elsewhere	4.000
Non-profit Organizations without Credit Available Elsewhere	3.000

The number assigned to this disaster for physical damage is 13044C and for economic injury is 130450.

(Catalog of Federal Domestic Assistance Numbers 59002 and 59008)

James E. Rivera,

Associate Administrator for Disaster Assistance.

[FR Doc. 2012–7116 Filed 3–23–12; 8:45 am]

BILLING CODE 8025–01–P

SMALL BUSINESS ADMINISTRATION

[Disaster Declaration #13044 and #13045]

West Virginia Disaster #WV–00023

AGENCY: Small Business Administration.

ACTION: Notice.

SUMMARY: This is a Notice of the Presidential declaration of a major disaster for the State of West Virginia (FEMA–4059–DR), dated 03/16/2012.

Incident: Severe Storms, Tornadoes, Flooding, Mudslides, and Landslides.

Incident Period: 02/29/2012 through 03/05/2012.

DATES: *Effective Date:* 03/16/2012.

Physical Loan Application Deadline Date: 05/15/2012.

Economic Injury (Eidl) Loan Application Deadline Date: 12/17/2012.

ADDRESSES: Submit completed loan applications to: U.S. Small Business Administration, Processing and Disbursement Center, 14925 Kingsport Road, Fort Worth, TX 76155.

FOR FURTHER INFORMATION CONTACT: A. Escobar, Office of Disaster Assistance, U.S. Small Business Administration, 409 3rd Street SW., Suite 6050, Washington, DC 20416.

SUPPLEMENTARY INFORMATION: Notice is hereby given that as a result of the President's major disaster declaration on 03/16/2012, applications for disaster loans may be filed at the address listed above or other locally announced locations.

The following areas have been determined to be adversely affected by the disaster:

Primary Counties (Physical Damage and Economic Injury Loans): Lincoln, Marion, Wayne.

Contiguous Counties (Economic Injury Loans Only):

West Virginia: Boone, Cabell, Harrison, Kanawha, Logan, Mingo, Monongalia, Putnam, Taylor, Wetzel.

Kentucky: Boyd, Lawrence, Martin.

Ohio: Lawrence.

The Interest Rates are:

	Percent
For Physical Damage:	
Homeowners with Credit Available Elsewhere	3.750
Homeowners without Credit Available Elsewhere	1.875
Businesses with Credit Available Elsewhere	6.000
Businesses without Credit Available Elsewhere	4.000
Non-profit Organizations with Credit Available Elsewhere	3.125
Non-profit Organizations without Credit Available Elsewhere	3.000
For Economic Injury:	
Businesses & Small Agricultural Cooperatives without Credit Available Elsewhere	4.000
Non-profit Organizations without Credit Available Elsewhere	3.000

The number assigned to this disaster for physical damage is 13044C and for economic injury is 130450.

(Catalog of Federal Domestic Assistance Numbers 59002 and 59008)

James E. Rivera,

Associate Administrator for Disaster Assistance.

[FR Doc. 2012–7111 Filed 3–23–12; 8:45 am]

BILLING CODE 8025–01–P

SMALL BUSINESS ADMINISTRATION

[Disaster Declaration #12740 and #12741]

Texas Disaster #X–00380

AGENCY: Small Business Administration.

ACTION: Amendment 5.

SUMMARY: This is an amendment of the Presidential declaration of a major disaster for Public Assistance Only for the State of Texas (FEMA–1999–DR), dated 08/15/2011.

Incident: Wildfires.

Incident Period: 04/06/2011 through 08/29/2011.

DATES: *Effective Date:* 03/15/2012.

Physical Loan Application Deadline Date: 10/14/2011.

Economic Injury (EIDL) Loan Application Deadline Date: 05/14/2012.

ADDRESSES: Submit completed loan applications to: U.S. Small Business Administration, Processing and Disbursement Center, 14925 Kingsport Road, Fort Worth, TX 76155.

FOR FURTHER INFORMATION CONTACT: A. Escobar, Office of Disaster Assistance, U.S. Small Business Administration, 409 3rd Street SW., Suite 6050, Washington, DC 20416.

SUPPLEMENTARY INFORMATION: The notice of the President's major disaster declaration for Private Non-Profit organizations in the State of Texas, dated 08/15/2011, is hereby amended to include the following areas as adversely affected by the disaster.

Primary Counties: Erath, Midland, Wichita.

All other information in the original declaration remains unchanged.

(Catalog of Federal Domestic Assistance Numbers 59002 and 59008)

James E. Rivera,

Associate Administrator for Disaster Assistance.

[FR Doc. 2012–7110 Filed 3–23–12; 8:45 am]

BILLING CODE 8025–01–P

SMALL BUSINESS ADMINISTRATION

Advisory Committee on Veterans Business Affairs; Meeting

AGENCY: Small Business Administration.

ACTION: Notice of Open Federal Advisory Committee Meeting.

SUMMARY: The SBA is issuing this notice to announce the location, date, time, and agenda for the next meeting of the Advisory Committee on Veterans Business Affairs. The meeting will be open to the public.

DATES: March 26, 2012 from 9 a.m. to 5 p.m. in the Eisenhower Conference room, side B, located on the 2nd floor.

ADDRESSES: U.S. Small Business Administration, 409 3rd Street SW., Washington, DC 20416.

SUPPLEMENTARY INFORMATION: Pursuant to section 10(a) (2) of the Federal Advisory Committee Act (5 U.S.C., Appendix 2), SBA announces the meeting of the Advisory Committee on Veterans Business Affairs. The Advisory Committee on Veterans Business Affairs serves as an independent source of advice and policy recommendation to the Administrator of the U.S. Small Business Administration.

The purpose of this meeting is scheduled as a full committee meeting. It will focus on strategic planning, updates on past and current events, and the ACVBA's objective for 2012. For information regarding our veterans' resources and partners, please visit our Web site at www.sba.gov/vets.

Further Information: The meeting is open to the public. Anyone wishing to attend this meeting or to make a presentation to the Advisory Committee on Veterans Business Affairs, advance notice is requested. Please contact Cheryl Simms, Program Liaison, at the U.S. Small Business Administration, Office of Veterans Business Development, 409 3rd Street SW., Washington, DC 20416; Telephone number: (202) 619–1697; Fax number (202) 481–6085 or by email at *cheryl.simms@sba.gov.*

If you require accommodations because of a disability, please contact the Office of Veterans Business Development at (202) 205–6773 at least two weeks in advance.

Dated: March 14, 2012.

Dan S. Jones,

SBA Committee Management Officer.

[FR Doc. 2012–6978 Filed 3–23–12; 8:45 am]

BILLING CODE 8025–01–P

DEPARTMENT OF STATE

[Public Notice 7831]

Notification of the Next CAFTA–DR Environmental Affairs Council Meeting and Request for Comments on the Meeting Agenda

AGENCY: Department of State.

ACTION: Notice of the CAFTA–DR Environmental Affairs Council meeting and request for comments on the meeting agenda.

SUMMARY: The Department of State and the Office of the United States Trade Representative are providing notice that the government parties to the Dominican Republic-Central America-United States Free Trade Agreement (CAFTA–DR) intend to hold the sixth meeting of the Environmental Affairs Council (Council) established under Chapter 17 of that agreement in San Pedro Sula, Honduras on April 12, 2012 at the Hilton Princess Hotel, 10 Calle y Ave. Circunvalación, S.O. Col. Trejo. All interested persons are invited to attend a public session beginning at 2:30 p.m. on April 12.

During the meeting, each Council Member will present their country's progress in implementing Chapter 17 obligations and on the impacts of environmental cooperation in their countries. The Council will also receive a presentation from the CAFTA–DR Secretariat for Environmental Matters (SEM) and discuss the Organization of

American States Third Evaluation Report: Monitoring Progress of the Environmental Cooperation Agenda in the CAFTA–DR Countries. For the public session of the meeting, the Council will highlight issues from the above discussion elements with a particular focus on Chapter 17 obligations and environmental cooperation successes.

All interested persons are invited to attend a public session where they will have the opportunity to ask questions and discuss implementation of Chapter 17 and environmental cooperation with Council Members. In addition, the SEM will present on the citizen submission process established under Chapter 17. More information on the Council is included below under

SUPPLEMENTARY INFORMATION. The Department of State and Office of the United States Trade Representative invite written comments or suggestions regarding the meeting agenda. In preparing comments, we encourage submitters to refer to Chapter 17 of the CAFTA–DR, the Final Environmental Review of the CAFTA–DR and the Agreement among the CAFTA–DR countries on Environmental Cooperation (ECA) (all documents available at *http://www.state.gov/e/oes/env/trade/caftadr/index.htm*).

DATES: To be assured of timely consideration, all written comments or suggestions are requested no later than April 6, 2012.

ADDRESSES: Written comments or suggestions should be submitted to both: (1) Rebecca Slocum, U.S. Department of State, Bureau of Oceans and International Environmental and Scientific Affairs, Office of Environmental Policy by email to *SlocumRB@state.gov* with the subject line ''CAFTA–DR EAC Meeting'' or by fax to (202) 647–5947; and (2) Kelly Milton, Director for International Environmental and Conservation Policy, Office of the United States Trade Representative by email to *KMilton@ustr.eop.gov* with the subject line ''CAFTA–DR EAC Meeting'' or by fax to (202) 395–9517. If you have access to the Internet you can view and comment on this notice by going to: *http://www.regulations.gov/#!home* and searching on docket number DOS–2012–0023.

FOR FURTHER INFORMATION, CONTACT: Rebecca Slocum, (202) 647–4828 or Kelly Milton, (202) 395–9590.

SUPPLEMENTARY INFORMATION: Article 17.5 of the CAFTA–DR establishes an Environmental Affairs Council (the Council). Article 17.5 requires the Council to meet to oversee the implementation of, and review progress under, Chapter 17. Article 17.5 further requires, unless the governments otherwise agree, that each meeting of the Council include a session in which members of the Council have an opportunity to meet with the public to discuss matters relating to the implementation of Chapter 17.

In Article 17.9 of the CAFTA–DR, the governments recognize the importance of strengthening capacity to protect the environment and to promote sustainable development in concert with strengthening trade and investment relations and state their commitment to expanding their cooperative relationship on environmental matters. Article 17.9 also references the ECA, which sets out certain priority areas of cooperation on environmental activities that are also reflected in Annex 17.9 of the CAFTA–DR. These priority areas include, among other things: Reinforcing institutional and legal frameworks and the capacity to develop, implement, administer, and enforce environmental laws, regulations, standards and policies; conserving and managing shared, migratory and endangered species in international trade and management of protected areas; promoting best practices leading to sustainable management of the environment; and facilitating technology development and transfer and training to promote clean production technologies. The public is advised to refer to the State Department Web site at *http://www.state.gov/e/oes/env/* and the USTR Web site at *www.ustr.gov* for more information.

Disclaimer: This Public Notice is a request for comments and suggestions, and is not a request for applications. No granting of money is directly associated with this request for suggestions on the Council meeting agenda. There is no expectation of resources or funding associated with any comments or suggestions for the agenda.

Dated: March 20, 2012.

Sezaneh M. Seymour,

Acting Director, Office of Environmental Policy.

[FR Doc. 2012–7254 Filed 3–23–12; 8:45 am]

BILLING CODE 4710–09–P

STATE JUSTICE INSTITUTE

SJI Board of Directors Meeting, Notice

AGENCY: State Justice Institute.

ACTION: Notice of meeting.

SUMMARY: The SJI Board of Directors will be meeting on Monday, April 23, 2012 at 1 p.m. The meeting will be held at the National Center for State Courts Headquarters in Williamsburg, Virginia. The purpose of this meeting is to consider grant applications for the 2nd quarter of FY 2012, and other business. All portions of this meeting are open to the public.

ADDRESSES: National Center for State Courts Headquarters, 300 Newport Avenue, Williamsburg, VA 23185, 800–616–6164.

FOR FURTHER INFORMATION CONTACT: Jonathan Mattiello, Executive Director, State Justice Institute, 11951 Freedom Drive, Suite 1020, Reston, VA 22314, 571–313–8843, *contact@sji.gov.*

Jonathan D. Mattiello,

Executive Director.

[FR Doc. 2012–7179 Filed 3–23–12; 8:45 am]

BILLING CODE P

SUSQUEHANNA RIVER BASIN COMMISSION

Low Flow Protection Policy

AGENCY: Susquehanna River Basin Commission.

ACTION: Notice.

SUMMARY: As part of its regular business meeting held on March 15, 2012, in Harrisburg, Pennsylvania, the Susquehanna River Basin Commission (Commission) approved the release of a proposed Low Flow Protection Policy (Policy) for public review and comment. The Policy can be accessed on the Commission's Web site at *http://www.srbc.net/pubinfo/businessmeeting.htm,* or by contacting the Commission to receive a copy by first-class mail. Persons interested in providing comments are directed to submit the same in writing on or before May 16, 2012.

DATES: The deadline for the submission of written comments is May 16, 2012.

ADDRESSES: Comments may be mailed to: Mr. John Balay, Susquehanna River Basin Commission, 1721 N. Front Street, Harrisburg, PA 17102–2391, or electronically submitted through *http://www.srbc.net/pubinfo/businessmeeting.htm.*

FOR FURTHER INFORMATION CONTACT: John Balay, Manager of Planning and Operations, telephone: (717) 238–0423; fax: (717) 238–2436.

SUPPLEMENTARY INFORMATION: On March 15, 2012, the Commission approved the release of a proposed Low Flow Protection Policy for public review and comment. The Policy was developed over the past year in coordination with the Commission's Water Resources

Management Advisory Committee to improve low flow protection standards associated with approved water withdrawals. The improvements are largely based on scientific advances in ecosystem flow protection. The Commission will use the Policy and supporting technical guidance when reviewing withdrawal applications to establish limits and conditions on approvals consistent with the Commission's regulatory standards (18 CFR 806.23).

Authority: Public Law 91–575, 84 Stat. 1509 *et seq.,* 18 CFR parts 806, 807, and 808.

Dated: March 15, 2012.

Stephanie L. Richardson

Secretary to the Commission.

[FR Doc. 2012–7101 Filed 3–23–12; 8:45 am]

BILLING CODE 7040–01–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Public Notice for Waiver of Aeronautical Land-Use Assurance; Jackson Municipal Airport, Jackson, MN

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of intent of waiver with respect to land.

SUMMARY: The Federal Aviation Administration (FAA) is considering a proposal to authorize the release of 18 acres of the airport property at the Jackson Municipal Airport, Jackson MN. The City is proposing a land swap to exchange this 18 acre parcel for another parcel of 24.72 acres.

The acreage being released is not needed for aeronautical use as currently identified on the Airport Layout Plan.

The acreage comprising this parcel was originally acquired in 1976 with an Airport Development Aid Program (ADAP) grant (76–5–27–0045–01). In exchange for the 18 acres the airport will receive a new parcel of land in the approach to the crosswind runway 4/22. The appraised fair market value of the proposed release parcel is $130,500, the fair market value of the proposed acquire parcel is $165,000. The FAA approved a Categorical Exclusion for environmental requirements on May 13, 2010. Approval does not constitute a commitment by the FAA to financially assist in the disposal of the subject airport property nor a determination of eligibility for grant-in-aid funding from the FAA. The disposition of proceeds from the disposal of the airport property will be in accordance with FAA's Policy and Procedures Concerning the Use of Airport Revenue, published in the **Federal Register** on February 16, 1999.

In accordance with section 47107(h) of title 49, United States Code, this notice is required to be published in the **Federal Register** 30 days before modifying the land-use assurance that requires the property to be used for an aeronautical purpose.

DATES: Comments must be received on or before April 25, 2012.

ADDRESSES: Ms. Sandra E. DePottey, Program Manager, Federal Aviation Administration, Airports District Office, 6020 28th Avenue South, Room 102, Minneapolis, MN 55450–2706. Telephone Number (612) 253–4642/ FAX Number (612) 253–4611. Documents reflecting this FAA action may be reviewed at this same location or at the Minnesota Department of Transportation, 222 East Plato Blvd., St. Paul, MN 55107.

FOR FURTHER INFORMATION CONTACT: Ms. Sandra E. DePottey, Program Manager, Federal Aviation Administration, Airports District Office, 6020 28th Avenue South, Room 102, Minneapolis, MN 55450–2706. Telephone Number (612) 253–4642/FAX Number (612) 253–4611. Documents reflecting this FAA action may be reviewed at this same location or at the Minnesota Department of Transportation, 222 East Plato Blvd., St. Paul, MN 55107.

SUPPLEMENTARY INFORMATION: Following is a description of the subject airport property to be released at Jackson Municipal Airport in Jackson, Minnesota and described as follows:

A parcel of land located in the westerly 18.00 acres of that part of the North Half of the Northeast Quarter (N1/ 2NE1/4) of Section 13, Township 102 North, Range 35 West.

Said parcel subject to all easements, restrictions, and reservations of record.

Issued in Minneapolis, MN, on January 30, 2012.

Steven J. Obenauer,

Manager, Minneapolis Airports District Office, FAA, Great Lakes Region.

[FR Doc. 2012–7233 Filed 3–23–12; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

Notice of Final Federal Agency Actions on Proposed Highway in Utah

AGENCY: Federal Highway Administration (FHWA), DOT.

ACTION: Notice of Limitation on Claims for Judicial Review of Actions by FHWA and other Federal agencies.

SUMMARY: This notice announces actions taken by the FHWA and other Federal agencies that are final within the meaning of 23 U.S.C. 139(l)(1). The actions relate to a proposed transportation corridor project (Cottonwood Street; 4500 South to Vine Street in Murray City, Salt Lake County in the State of Utah). These actions grant licenses, permits, and approvals for the project.

DATES: By this notice, the FHWA is advising the public of final agency actions subject to 23 U.S.C. 139(l)(1). A claim seeking judicial review of the FHWA actions on the highway project will be barred unless the claim is filed on or before September 22, 2012. If the Federal law that authorizes judicial review of a claim provides a time period of less than 180 days for filing such claim, then that shorter time period still applies.

FOR FURTHER INFORMATION CONTACT: For FHWA: Mr. Edward Woolford, Environmental Program Manager, Federal Highway Administration, 2520 West 4700 South, Suite 9A, Salt Lake City, Utah 84129; telephone (801) 955–3524; email: *Edward.Woolford@dot.gov.* The FHWA Utah Division's regular business hours are Monday through Friday, 7:30 a.m. to 4:30 p.m. MST.

SUPPLEMENTARY INFORMATION: Notice is hereby given that the FHWA and other Federal agencies have taken final agency actions subject to 23 U.S.C. 139(l)(1) by issuing licenses, permits, and approvals for the following highway project in the State of Utah: Cottonwood Street; 4500 South to Vine Street in Murray City, Salt Lake County, project number S–LC35(198). The project will be a one-way couplet with southbound traffic on Box Elder Street and northbound traffic on Hanauer Street. The project includes construction of a new section of Hanauer Street between 4800 South and Vine Street. The project will improve connectivity and reduce pedestrian and auto travel distances between the planned Murray City Center District, transit stations, neighborhoods, and nearby arterials; and it supports Murray City's plans for economic redevelopment and a more livable, walkable community in the year 2040.

The actions by the FHWA and the laws under which such actions were taken, are described in the Environmental Assessment (EA) for the project, approved on August 17,2011, in the FHWA Finding of No Significant Impact (FONSI) issued on March 1,

2012, and in other documents in the FHWA project files. The EA, FONSI, are available by contacting the FHWA at the address provided above. The FHWA EA and FONSI can be viewed and downloaded from the project Web site at *www.cottonwoodstreetstudy.com* or viewed at public libraries in the project area.

This notice applies to all Federal agency decisions, actions, approvals, licenses and permits on the project as of the issuance date of this notice and all laws under which such actions were taken, including but not limited to:

1. General: National Environmental Policy Act (NEPA) [42 U.S.C. 4321–4347]; Federal-Aid Highway Act [23 U.S.C. 109];

2. Air: Clean Air Act [42 U.S.C. 7401–7671(q)];

3. Land: Section 4(f) of the Department of Transportation Act of 1966 [49 U.S.C. 303];Wildlife: Endangered Species Act [16 U.S.C. 1531–1544]; Migratory Bird Treaty Act [16 U.S.C. 703–712];

4. Historic and Cultural Resources: Section 106 of the National Historic Preservation Act of 1966, as amended [16 U.S.C. 470f.];

5. Social and Economic: Civil Rights Act of 1964 [42 U.S.C. 2000(d)–2000(d)(1)]; Farmland Protection Policy Act (FPPA) [7 U.S.C. 4201–4209];

6. Wetlands and Water Resources: Clean Water Act, 33 U.S.C. 1251–1377 [Section 404, Section 401, Section 319]; Safe Drinking Water Act [42 U.S.C. 300f et seq.]; TEA–21 Wetlands Mitigation [23 U.S.C. 103(b)(6)(m), 133(b)(11)]; Flood disaster Protection Act [42 U.S.C. 4001–4129].

Executive Orders: E.O. 11990, Protection of Wetlands; E.O. 11988, Floodplain Management; E.O. 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations; E.O. 13175, Consultation and Coordination with Indian Tribal Governments; E.O. 13112, Invasive Species. Nothing in this notice creates a cause of action under these Executive Orders. (Catalog of Federal Domestic Assistance Program Number 20.205, Highway Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program.)

Authority: 23 U.S.C. 139(l)(1).

Issued on: March 19, 2012.

James C. Christian,

Division Administrator, Salt Lake City.

[FR Doc. 2012–7162 Filed 3–23–12; 8:45 am]

BILLING CODE 4910–RY–P

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

Notice of Final Federal Agency Actions on Proposed Transportation Improvements in Utah

AGENCY: Federal Highway Administration (FHWA), DOT.

ACTION: Notice of Limitation on Claims for Judicial Review of Actions by FHWA and Other Federal Agencies.

SUMMARY: This notice announces actions taken by the FHWA and other Federal agencies that are final within the meaning of 23 U.S.C. 139(l)(1). The actions relate to the proposed interchange and roadway improvement project (Bangerter 600 West Project) in Draper, Salt Lake County in the State of Utah. These actions grant licenses, permits, and approvals for the project.

DATES: By this notice, the FHWA is advising the public of final agency actions subject to 23 U.S.C. 139(l)(1). A claim seeking judicial review of the Federal agency actions on the highway project will be barred unless the claim is filed on or before September 22, 2012. If the Federal law that authorizes judicial review of a claim provides a time period of less than 180 days for filing such claim, then that shorter time period still applies.

FOR FURTHER INFORMATION CONTACT: For FHWA: Mr. Edward Woolford, Environmental Program Manager, Federal Highway Administration, 2520 West 4700 South, Suite 9A, Salt Lake City, Utah 84129; telephone: (801) 955–3500; email: *Edward.Woolford@dot.gov.* The FHWA Utah Division Office's normal business hours are 7:35 a.m. to 4:30 p.m. (Mountain Standard Time).

SUPPLEMENTARY INFORMATION: Notice is hereby given that the FHWA and other Federal agencies have taken final agency actions by issuing licenses, permits, and approvals for the following highway project in the State of Utah: The Bangerter 600 West Project in Draper, Salt Lake County, Utah, project number FHWA–UT–EIS–11–01–F. Federal Lead Agency: Federal Highway Administration. Project Description: The project consists of improvements to Bangerter Highway between Interstate 15 (I–15) and the Union Pacific Railroad (UPRR) line at about 900 West in the city of Draper in Salt Lake County. The Selected Alternative (600 West Interchange with Right Turns Only at 200 West Alternative (Alternative 4F)) implements a transportation project consisting of: (1) A new interchange on Bangerter Highway at about 600 West; (2) eliminates the signals from the intersection at 200 West; (3) allows only right turns at the 200 West intersection. Left turns would not be permitted; (4) adds an additional west travel lane on Bangerter Highway between I–15 and the 600 West interchange; (5) adds an additional lane on the southbound I–15 off ramp; (6) adds a dedicated right-turn lane on westbound Bangerter Highway between I–15 and 200 West; (7) adds an acceleration lane from 200 West onto westbound Bangerter Highway to 600 West; (8) builds a connecting five-lane arterial from the 600 West interchange to the intersection of 13490 South and 200 West; (9) builds a connecting five-lane arterial to tie into 13800 South; (10) makes improvements to the 13490 South/200 West intersection to improve traffic flow. This would include providing double left-turn lanes from eastbound 13490 South to northbound 200 West; (11) relocates the Jordan and Salt Lake City Canal or place it in a pipe; (12) relocates utilities (fiber optic and drainage features) along Bangerter Highway; (13) includes stormwater drainage and passive water quality treatment.

The actions by the FHWA and other Federal agencies, and the laws under which such actions were taken, are described in the Final Environmental Impact Statement (FEIS) for the project, approved on November 18, 2011, in the FHWA Record of Decision (ROD) issued on March 7, 2012, and other key documents. The FEIS and ROD are available by contacting FHWA at the address provided above. The FHWA FEIS and ROD can be viewed and downloaded from the project Web site at *http://www.udot.utah.gov/bangerter600west/,* or viewed at public libraries in the project area.

This notice applies to all Federal agency decisions on the project as of the issuance date of this notice and all laws under which such actions were taken, including but not limited to:

1. *General:* National Environmental Policy Act (NEPA) [42 U.S.C. 4321–4347]; Federal-Aid Highway Act [23 U.S.C. 109];

2. *Air:* Clean Air Act [42 U.S.C. 7401–7671(q)];

3. *Land:* Section 4(f) of the Department of Transportation Act of 1966 [49 U.S.C. 303];

4. *Wildlife:* Endangered Species Act [16 U.S.C. 1531–1544]; Migratory Bird Treaty Act [16 U.S.C. 703–712];

5. *Historic and Cultural Resources:* Section 106 of the National Historic Preservation Act of 1966, as amended [16 U.S.C. 470f];

6. *Social and Economic:* Civil Rights Act of 1964 [42 U.S.C. 2000(d)–

2000(d)(1)]; Farmland Protection Policy Act (FPPA) [7 U.S.C. 4201–4209];

7. *Wetlands and Water Resources:* Clean Water Act, 33 U.S.C. 1251–1377 [Section 404, Section 401, Section 319]; Safe Drinking Water Act [42 U.S.C. 300f et seq.]; TEA–21 Wetlands Mitigation [23 U.S.C. 103(b)(6)(m), 133(b)(11)]; Flood Disaster Protection Act [42 U.S.C. 4001–129].

Executive Orders: E.O. 11990, Protection of Wetlands; E.O. 11988, Floodplain Management; E.O. 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations; E.O. 13175, Consultation and Coordination with Indian Tribal Governments; E.O. 13112, Invasive Species. Nothing in this notice creates a cause of action under these Executive Orders.

(Catalog of Federal Domestic Assistance Program Number 20.205, Highway Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program.)

Authority: 23 U.S.C. 139(l)(1).

Issued on: March 19, 2012.

James C. Christian,

Division Administrator, Salt Lake City.

[FR Doc. 2012–7168 Filed 3–23–12; 8:45 am]

BILLING CODE 4910–RY–P

DEPARTMENT OF TRANSPORTATION

Federal Transit Administration

[Docket No. FTA–2012–0006]

Notice of Proposed Buy America Waivers

AGENCY: Federal Transit Administration (FTA), DOT.

ACTION: Notice of proposed Buy America waiver and request for comment.

SUMMARY: The purpose of this notice is to solicit comment a request from Allison Transmission, Inc. to renew a waiver for its hybrid electric propulsion system, Energy Storage Unit subsystem H 49.40 EPSystem, until December 31, 2013 so they may complete their ongoing process to secure a domestic supplier of Lithium Ion batteries. FTA seeks public comment before deciding whether to grant Allison's request.

DATES: Comments must be received by April 2, 2012. Late filed comments will be considered to the extent practicable.

ADDRESSES: Please submit your comments by only one of the following means, identifying your submissions by docket number FTA–2012–0006. All electronic submissions must be made to the U.S. Government electronic site at *www.regulations.gov.* Commenters should follow the instructions below for mailed and hand delivered comments.

(1) *Web site: www.regulations.gov.* Follow the instructions for submitting comments on the U.S. Government electronic docket site;

(2) *Fax:* (202) 493–2251;

(3) *Mail:* U.S. Department of Transportation, 1200 New Jersey Avenue SE, Docket Operations, M–30, Room W12–140, Washington, DC 20590–0001.

(4) *Hand Delivery:* Room W12–140 on the first floor of the West Building, 1200 New Jersey Avenue SE, Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Instructions: All submissions must make reference to the ''Federal Transit Administration'' and include docket number FTA–2012–0006. Due to security procedures in effect since October 2001, mail received through the U.S. Postal Service may be subject to delays. Parties making submissions responsive to this notice should consider using an express mail firm to ensure the prompt filing of any submissions not filed electronically or by hand. Note that all submissions received, including any personal information therein, will be posted without change or alteration to *www.regulations.gov.* For More information, you may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477), or visit *www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT: Jayme L. Blakesley at (202) 366–0304 or *jayme.blakesley@dot.gov.*

SUPPLEMENTARY INFORMATION: The purpose of this notice is to seek public comment on whether the Federal Transit Administration (FTA) should waive its Buy America requirements of 49 U.S.C. 5323(j), as implemented at 49 CFR Part 661, until December 31, 2013, for an Energy Storage Unit (ESU) manufactured by Allison Transmission, Inc. (Allison). The purpose of the waiver is to allow Allison until December 2013 to complete its ongoing process to secure and qualify a domestic supplier of Lithium Ion batteries.

The ESU is one of five subsystems of Allison's hybrid-electric propulsion system known as the H 40/50 EP System. The ESU supplies and stores energy for the H 40/50 EP System during normal motor-generator operation and during regenerative braking. The ESU is a packaged subsystem comprised of proprietary batteries, a battery management system, thermal management equipment and containment. It is manufactured to Allison's specifications and is functionally critical and specific to the H 40/50 EP System. The company currently procures the ESU completely assembled from a supplier that cannot comply with FTA's Buy America requirements.

With few exceptions, FTA's Buy America rules require that all steel, iron and manufactured goods used in FTA-funded projects be produced in the United States. One exception to Buy America is non-availability—that in some instances certain steel, iron, and manufactured goods are not produced in the United States in sufficient and reasonably available quantities or are not of a satisfactory quality. When this is the case, FTA may waive its Buy America requirements and allow the use of foreign-produced goods in an FTA-funded project.

On April 3, 2009, FTA granted a limited non-availability waiver to Allison. The waiver allowed Allison to produce its ESU outside the United States. While the waiver was in effect, FTA instructed Allison to identify and qualify a domestic manufacturer capable of producing ESUs for Allison's H 40/50 EP System. The waiver expired and, despite its best efforts, Allison has not identified and qualified a U.S. manufacturer.

Allison asked FTA to renew and extend the waiver until December 31, 2013, to allow it to complete the qualification process. According to Allison, since the issuance of the 2009 waiver, Allison has utilized competitive assessments, technical reviews, and independent market studies with U.S. based Lithium Ion suppliers. The company compared its current Nickel Metal Hydride (NiMH) batteries with Lithium Ion and determined Lithium Ion was appropriate for transit bus applications. In addition, Allison is changing from NiMH to Lithium Ion because no NiMH supplier is producing within the U.S. to meet Allison's requirements (design, reliability, quality, pricing, etc). Most domestic suppliers who expressed interest in starting production of the ESU subsystem quoted Lithium Ion technologies. Five companies have started or are starting cell production in the United States. Five additional companies are starting pack production in the Unites States.

After contacting and surveying a number of potential suppliers, Allison has chosen a domestic supplier. The selection and approval of this supplier

and its product is subject to the guidelines and requirements of Allison's structured product development and approval process known as the Process of Concurrent Engineering (POCE). This process applies to all products developed, manufactured and sold by Allison, including components and/or subcomponents that are purchased by Allison and provided as part of Allison's system or product that are delivered to its customers. The POCE process consists of four activity areas of focus with each having durations of approximately three months to one year. Allison is currently in the Concept Validation (CV) phase, evaluating/validating the possibility of utilizing a current U.S. hybrid ESS supplier who is working with Allison through an ARRA grant awarded in fiscal year 2009 (DOE Gran DE–EE00002025). Beyond the CV phase, additional joint work has been planned for Design Validation, OEM vehicle testing, and Production Validation phases that are needed to assure an appropriate Start of Production launch.

FTA proposes to grant Allison a waiver through December 31, 2013. Unlike other requests for non-availability waivers, the granting of which would enable otherwise non-compliant materials to be utilized until a U.S. producers comes forward, this waiver would allow Allison to maintain its position in the market while continuing the process of securing a domestic manufacturer for its ESU subsystems. Without a waiver extension, Allison faces a potential loss of volume, market share, and revenue, and a potential loss of U.S. Jobs. In addition, Allison's bus manufacturing customers would be limited in their ability to offer buses utilizing hybrid propulsion technology, without furthering the goals of Buy America.

Before deciding whether to grant Allison's request, FTA seeks comment from all interested parties. In the interest of transparency, FTA has published copies of Allison's request to the docket. Interested parties may access these materials by visiting the docket comments by April 2, 2012. Late-filed comments will be considered to the extent practicable.

Issued this 16th day of March 2012.

Dorval R. Carter, Jr.,

Chief Counsel.

[FR Doc. 2012–7186 Filed 3–23–12; 8:45 am]

BILLING CODE 4910–57–P

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

[Docket No. NHTSA–2012–0031, Notice 1]

Notice of Receipt of Petition for Decision That Nonconforming Right-Hand Drive 2000–2003 Jeep Wrangler Multi-Purpose Passenger Vehicles Are Eligible for Importation

AGENCY: National Highway Traffic Safety Administration, DOT.

ACTION: Notice of receipt of petition.

SUMMARY: This document announces receipt by the National Highway Traffic Safety Administration (NHTSA) of a petition for a decision that right-hand drive (RHD) 2000–2003 Jeep Wrangler multi-purpose passenger vehicles (MPVs) that were not originally manufactured to comply with all applicable Federal Motor Vehicle Safety Standards (FMVSS) are eligible for importation into the United States because they have safety features that comply with, or are capable of being altered to comply with, all such standards.

DATES: The closing date for comments on the petition is April 25, 2012.

ADDRESSES: Comments should refer to the docket and notice numbers above and be submitted by any of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov.* Follow the online instructions for submitting comments.
- *Mail:* Docket Management Facility: U.S. Department of Transportation, 1200 New Jersey Avenue SE., West Building Ground Floor, Room W12–140, Washington, DC 20590–0001.
- *Hand Delivery or Courier:* West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., between 9 a.m. and 5 p.m. ET, Monday through Friday, except Federal holidays.
- *Fax:* 202–493–2251.

Instructions: Comments must be written in the English language, and be no greater than 15 pages in length, although there is no limit to the length of necessary attachments to the comments. If comments are submitted in hard copy form, please ensure that two copies are provided. If you wish to receive confirmation that your comments were received, please enclose a stamped, self-addressed postcard with the comments. Note that all comments received will be posted without change to *http://www.regulations.gov*, including any personal information provided. Please see the Privacy Act heading below.

Privacy Act: Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477–78).

How to Read Comments submitted to the Docket: You may read the comments received by Docket Management at the address and times given above. You may also view the documents from the Internet at *http://www.regulations.gov.*

Follow the online instructions for accessing the dockets. The docket ID number and title of this notice are shown at the heading of this document notice. Please note that even after the comment closing date, we will continue to file relevant information in the Docket as it becomes available. Further, some people may submit late comments. Accordingly, we recommend that you periodically search the Docket for new material.

FOR FURTHER INFORMATION CONTACT: George Stevens, Office of Vehicle Safety Compliance, NHTSA (202–366–5308).

SUPPLEMENTARY INFORMATION:

Background

Under 49 U.S.C. 30141(a)(1)(B), a motor vehicle that was not originally manufactured to conform to all applicable FMVSS, and has no substantially similar U.S.-certified counterpart, shall be refused admission into the United States unless NHTSA has decided that the motor vehicle has safety features that comply with, or are capable of being altered to comply with, all applicable FMVSS based on destructive test data or such other evidence as NHTSA decides to be adequate.

Petitions for eligibility decisions may be submitted by either manufacturers or importers who have registered with NHTSA pursuant to 49 CFR Part 592. As specified in 49 CFR 593.7, NHTSA publishes notices in the **Federal Register** of each petition that it receives, and affords interested persons an opportunity to comment on the petition. At the close of the comment period, NHTSA decides, on the basis of the petition and any comments that it has received, whether the vehicle is eligible for importation. The agency then publishes this decision in the **Federal Register.**

US SPECS of Havre de Grace, Maryland (Registered Importer 03–321) has petitioned NHTSA to decide

whether nonconforming RHD 2000–2003 Jeep Wrangler MPVs are eligible for importation into the United States. US SPECS believes these vehicles are capable of being modified to meet all applicable FMVSS.

In its petition, US SPECS notes that Chrysler Corporation certified an RHD 2003 Jeep Wrangler MPV to all applicable FMVSS and offered that vehicle for sale in the United States. US SPECS contends that the non-U.S certified RHD 2000–2003 Jeep Wrangler MPV shares the same platform with the U.S.-certified RHD 2003 model, and on that basis compares the non-U.S. certified models to that vehicle to establish their conformity with many applicable FMVSS. Because there is no U.S.-certified counterpart for the RHD 2000, 2001, and 2002 Jeep Wrangler MPV, the petitioner acknowledged that it could not base its petition on the substantial similarity of those vehicles to the U.S.-certified RHD 2003 Jeep Wrangler MPV in light of the petitioning requirements of 49 U.S.C. 30141(a)(1)(A), as set forth in 49 CFR Part 593. Instead, the petitioner chose to establish import eligibility on the basis that the vehicles have safety features that comply with, or are capable of being modified to comply with, the FMVSS based on destructive test data or such other evidence that NHTSA decides to be adequate as set forth in 49 U.S.C. 30141(a)(1)(B). Nevertheless, the petitioner contends that the non-U.S. certified RHD 2000–2003 Jeep Wrangler MPV utilizes the same components as the U.S.- certified RHD 2003 Jeep Wrangler MPV in virtually all of the systems subject to the applicable FMVSS.

US SPECS submitted information with its petition intended to demonstrate that non-U.S. certified RHD 2000–2003 Jeep Wrangler MPVs conform to many FMVSS and are capable of being altered to comply with all other standards to which they were not originally manufactured to conform.

Specifically, the petitioner claims that non-U.S. certified RHD Jeep Wrangler MPVs, as originally manufactured, conform to: Standard Nos. 102 *Transmission Shift Lever Sequence, Starter Interlock, and Transmission Braking Effect,* 103 *Windshield Defrosting and Defogging Systems,* 104 *Windshield Wiping and Washing Systems,* 106 *Brake Hoses,* 113 *Hood Latch System,* 116 *Motor Vehicle Brake Fluids,* 119 *New Pneumatic Tires,* 124 *Accelerator Control Systems,* 135 *Light Vehicle Brake Standard,* 202 *Head Restraints,* 204 *Steering Control Rearward Displacement,* 205 *Glazing Materials,* 206 *Door Locks and Door Retention Components,* 207 *Seating Systems,* 210 *Seat Belt Assembly Anchorages,* 212 *Windshield Mounting,* 214 *Side Impact Protection,* 216 *Roof Crush Resistance,* 219 *Windshield Zone Intrusion,* and 302 *Flammability of Interior Materials.*

The petitioner also contends that the vehicles are capable of being altered to meet the following standards, in the manner indicated:

Standard No. 101 *Controls and Displays:* replacement of the speedometer with a unit calibrated in miles per hour if the vehicle is not already so equipped.

Standard No. 108 *Lamps, Reflective Devices and Associated Equipment:* if the vehicle is not already so equipped, installation of U.S.-model: (a) Headlamps and front side marker lamps; (b) tail lamp assemblies that incorporate rear side marker lamps; (c) center high-mounted stop lamp; and (d) front and rear side reflex reflectors.

Standard No. 111 *Rearview Mirrors:* installation of a U.S.-model passenger side rearview mirror, or inscription of the required warning statement on the face of that mirror, if the vehicle is not already so equipped.

Standard No. 114 *Theft Protection:* installation of a warning buzzer if the vehicle is not already so equipped.

Standard No. 118 *Power-Operated Window, Partition, and Roof Panel Systems:* inspection of each vehicle and reprogramming or rewiring of the power operated window system if the vehicle is not already equipped with a compliant system.

Standard No. 120 *Tire Selection and Rims for Motor Vehicles Other than Passenger Cars:* installation of a tire and rim information placard.

Standard No. 201 *Occupant Protection in Interior Impact:* inspection of each vehicle and replacement of components if necessary to ensure compliance with the standard.

Standard No. 208 *Occupant Crash Protection:* inspection of each vehicle to confirm that U.S.-model airbags, control unit, sensors, seat belts, and knee bolsters have been installed. The petitioner states that the vehicles are equipped with a seat belt and audible warning buzzer that are identical to those found on U.S.-certified models. In addition, the petitioner states that the vehicles are equipped with dual front airbags and knee bolsters, and combination lap and shoulder belts at the front and rear outboard seating positions that are self-tensioning and are released by means of a single red push button.

Standard No. 209 *Seat Belt Assemblies:* Replacement of the passenger side seat belt with a U.S. model component on vehicles that are not already so equipped.

Standard No. 225 *Child Restraint Anchorage Systems:* inspection of each vehicle and installation of a U.S. model anchorage on all vehicles that are not already so equipped.

Standard No. 301 *Fuel System Integrity:* inspection of each vehicle and installation of U.S.-conforming components on all vehicles not already so equipped to ensure that the fuel system meets the requirements of this standard.

In addition, the petitioner states that a vehicle identification number plate must be installed in the area of the left windshield post to meet the requirements of 49 CFR Part 565 if the vehicle is not already so equipped.

All comments received before the close of business on the closing date indicated above will be considered, and will be available for examination in the docket at the above addresses both before and after that date. To the extent possible, comments filed after the closing date will also be considered. Notice of final action on the petition will be published in the **Federal Register** pursuant to the authority indicated below.

Authority: 49 U.S.C. 30141(a)(1)(A) and (b)(1); 49 CFR 593.8; delegations of authority at 49 CFR 1.50 and 501.8.

Issued on: March 19, 2012.

Claude H. Harris,

Director, Office of Vehicle Safety Compliance.

[FR Doc. 2012–7097 Filed 3–23–12; 8:45 am]

BILLING CODE 4910–59–P

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

[Docket No. NHTSA–2012–0030, Notice 1]

Notice of Receipt of Petition for Decision That Nonconforming 2005 Ifor Williams LM85G Trailers Are Eligible for Importation

AGENCY: National Highway Traffic Safety Administration, DOT.

ACTION: Notice of receipt of petition.

SUMMARY: This document announces receipt by the National Highway Traffic Safety Administration (NHTSA) of a petition for a decision that 2005 Ifor Williams LM85G trailers that were not originally manufactured to comply with all applicable Federal Motor Vehicle Safety Standards (FMVSS) are eligible for importation into the United States because they have safety features that

comply with, or are capable of being altered to comply with, all such standards.

DATES: The closing date for comments on the petition is April 25, 2012.

ADDRESSES: Comments should refer to the docket and notice numbers above and be submitted by any of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov.* Follow the online instructions for submitting comments.
- *Mail:* Docket Management Facility: U.S. Department of Transportation, 1200 New Jersey Avenue SE., West Building Ground Floor, Room W12–140, Washington, DC 20590–0001
- *Hand Delivery or Courier:* West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., between 9 a.m. and 5 p.m. ET, Monday through Friday, except Federal holidays.
- *Fax:* 202–493–2251.

Instructions: Comments must be written in the English language, and be no greater than 15 pages in length, although there is no limit to the length of necessary attachments to the comments. If comments are submitted in hard copy form, please ensure that two copies are provided. If you wish to receive confirmation that your comments were received, please enclose a stamped, self-addressed postcard with the comments. Note that all comments received will be posted without change to *http://www.regulations.gov,* including any personal information provided. Please see the Privacy Act heading below.

Privacy Act: Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477–78).

How to Read Comments submitted to the Docket: You may read the comments received by Docket Management at the address and times given above. You may also view the documents from the Internet at *http://www.regulations.gov.* Follow the online instructions for accessing the dockets. The docket ID number and title of this notice are shown at the heading of this document notice. Please note that even after the comment closing date, we will continue to file relevant information in the Docket as it becomes available. Further, some people may submit late comments. Accordingly, we recommend that you periodically search the Docket for new material.

FOR FURTHER INFORMATION CONTACT: George Stevens, Office of Vehicle Safety Compliance, NHTSA (202–366–5308).

SUPPLEMENTARY INFORMATION:

Background

Under 49 U.S.C. 30141(a)(1)(B), a motor vehicle, including a trailer, that was not originally manufactured to conform to all applicable FMVSS, and has no substantially similar U.S.-certified counterpart, shall be refused admission into the United States unless NHTSA has decided that the motor vehicle has safety features that comply with, or are capable of being altered to comply with, all applicable FMVSS based on destructive test data or such other evidence as NHTSA decides to be adequate.

Petitions for eligibility decisions may be submitted by either manufacturers or importers who have registered with NHTSA pursuant to 49 CFR Part 592. As specified in 49 CFR 593.7, NHTSA publishes notices in the **Federal Register** of each petition that it receives, and affords interested persons an opportunity to comment on the petition. At the close of the comment period, NHTSA decides, on the basis of the petition and any comments that it has received, whether the vehicle is eligible for importation. The agency then publishes this decision in the **Federal Register.**

J.K. Technologies, LLC of Baltimore, Maryland (J.K.) (Registered Importer 90–006) has petitioned NHTSA to decide whether nonconforming 2005 Ifor Williams LM85G trailers are eligible for importation into the United States. J.K. believes these vehicles are capable of being modified to meet all applicable FMVSS.

J.K. submitted information with its petition intended to demonstrate that 2005 Ifor Williams LM85G trailers conform to one FMVSS and are capable of being altered to comply with all other standards to which they were not originally manufactured to conform.

Specifically, the petitioner claims that 2005 Ifor Williams LM85G trailers, as originally manufactured, are equipped with DOT-compliant tires, as required by Standard No. 119 *New Pneumatic Tires for Vehicles other than Passenger Cars.*

The petitioner contends that the nonconforming 2005 Ifor Williams LM85G trailers are capable of being readily altered to meet the following standards, in the manner indicated:

Standard No. 108 *Lamps, Reflective Devices and Associated Equipment:* Installation of conforming reflex reflectors, tail lamps, license plate lamps, rear side marker lamps, front side marker lamps, intermediate side markers lamps, rear identification lamps, and front and rear clearance lamps, as necessary to achieve compliance with the standard.

Standard No. 120 *Tire Selection and Rims for Motor Vehicles Other than Passenger Cars:* installation of a tire information placard, and inspection of all vehicles and replacement of any nonconforming rims with ones that meet the standard.

In addition, the petitioner states that a vehicle identification number plate or label must be installed to meet the requirements of 49 CFR part 565 if the vehicle is not already so equipped.

All comments received before the close of business on the closing date indicated above will be considered, and will be available for examination in the docket at the above addresses both before and after that date. To the extent possible, comments filed after the closing date will also be considered. Notice of final action on the petition will be published in the **Federal Register** pursuant to the authority indicated below.

Authority: 49 U.S.C. 30141(a)(1)(A) and (b)(1); 49 CFR 593.8; delegations of authority at 49 CFR 1.50 and 501.8.

Issued on: March 9, 2012.

Claude H. Harris,

Director, Office of Vehicle Safety Compliance.

[FR Doc. 2012–7099 Filed 3–23–12; 8:45 am]

BILLING CODE 4910–59–P

DEPARTMENT OF TRANSPORTATION

Pipeline and Hazardous Materials Safety Administration

[Docket No. PHMSA–2012–0058; Notice No. 12–4]

United States-Canada Regulatory Cooperation Council (RCC)—Transportation—Dangerous Goods Working Group

AGENCY: Pipeline and Hazardous Materials Safety Administration (PHMSA), Department of Transportation.

ACTION: Notice of request for stakeholder input.

SUMMARY: This notice is a request for comments and suggestions relative to the draft work plan of the Transportation—Dangerous Goods Working Group, of the United States-Canada Regulatory Cooperation Council (RCC). Comments will be accepted from all interested stakeholders.

DATES: Comments must be received by April 25, 2012.

ADDRESSES: *Comments:* It is requested that comments be submitted via email to *rcc@trade.gov* as well as by any one of the following methods (please identify comments by the docket number PHMSA–2012–0058):

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the online instructions for submitting comments.
- *Fax:* 1–202–493–2251.
- *Mail:* Docket Operations, U.S. Department of Transportation, West Building, Ground Floor, Room W12–140, Routing Symbol M–30, 1200 New Jersey Avenue SE., Washington, DC 20590.
- *Hand Delivery:* To Docket Operations, Room W12–140 on the ground floor of the West Building, 1200 New Jersey Avenue SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Instructions: All submissions must include the agency name and docket number for this notice at the beginning of the comment. Note that all comments received will be posted without change to the Federal eRulemaking Portal, including any personal information provided.

Privacy Act: Anyone is able to search the electronic form of any written communications and comments received into any of our dockets by the name of the individual submitting the document (or signing the document, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (Volume 65, Number 70; Pages 19477–78), which may also be found at *http://www.dot.gov.*

Docket: For access to the docket to read background documents or comments received, go to *http://www.regulations.gov* or DOT's Docket Operations Office (see **ADDRESSES**).

FOR FURTHER INFORMATION CONTACT: Mr. Shane Kelley or Mr. Vincent Babich, Office of Hazardous Materials Safety, Department of Transportation, Washington, DC 20590; (202) 366–0656.

SUPPLEMENTARY INFORMATION: President Barack Obama and Prime Minister Stephen Harper created the U.S.-Canada Regulatory Cooperation Council (RCC) on February 4, 2011. After private sector consultations and bilateral negotiations, the RCC released the Joint Action Plan on Regulatory Cooperation on December 7, 2011. The Joint Action Plan is a practical first step to increased regulatory cooperation between the United States and Canada.

In order to address the dangerous goods (hazardous materials) transportation opportunities identified in the Joint Action Plan, the Transportation—Dangerous Goods Working Group led by senior officials of regulatory agencies from both countries has developed a work plan with concrete objectives, deliverables and milestones for tangible progress within the RCC's two-year mandate. When available, the work plan will be posted at *http://www.trade.gov/rcc/.*

The purpose of this request is to invite all interested stakeholders to provide comments relative to the plan and the RCC. The draft work plan has also been posted and is available for viewing under this docket number. All stakeholders including those who may not have participated in the United States-Canada Regulatory Cooperation Council (RCC) stakeholder engagement session on January 31, 2012 in Washington, DC are welcome to submit additional comments. Comments that were submitted prior to the publication date of this notice will be posted to this docket and do not need to be resubmitted.

PHMSA is particularly soliciting comments and suggestions in the following areas:

- The development of ongoing cooperation frameworks and alignment mechanisms in the work plan.
- Technical input relevant to issues identified in the work plan or otherwise in relation to the transportation of hazardous materials between the U.S. and Canada.
- Your preferred method and frequency of stakeholder engagement for the working group.
- Overall United States-Canada regulatory cooperation and the RCC process with respect to the transportation of hazardous materials.

Additional information concerning the RCC and the Joint Action Plan is available at *http://www.trade.gov/rcc/.*

Issued in Washington, DC on March 13, 2012.

Magdy El-Sibaie,

Associate Administrator for Hazardous Materials Safety.

[FR Doc. 2012–7193 Filed 3–23–12; 8:45 am]

BILLING CODE 4910–60–P

DEPARTMENT OF THE TREASURY

Proposed Collection; Comment Request for Notice 2011–87

ACTION: Notice; correction.

SUMMARY: The Department of the Treasury published a document in the **Federal Register** on February 9, 2012, inviting comments on a proposed and/or continuing information collection, as required by the Paperwork Reduction Act of 1995, Public Law 104–13 (44 U.S.C. 3506(c)(2)(A)). This document contained incorrect references.

Correction

In the **Federal Register** of February 9, 2011, in FR Doc. 2012–2980, make the following corrections:

- Page 6858, in the third column, under **SUMMARY**:, replace ''Alabama'' with ''New York''.
- Page 6858, in the third column, under **SUPPLEMENTARY INFORAMTION**:, *Title:* replace ''Alabama'' with ''New York''.
- Page 6859, in the first column, fourth line of text beginning with ''caused by'', replace ''caused by severe storms, tornadoes, straight-line winds and flooding in Alabama beginning on April 15, 2011.'' with ''in the State of New York caused by either Hurricane Irene during the period of August 26, 2011, to September 5, 2011, or the remnants of Tropical Storm Lee during the period of September 7, 2011, to September 11, 2011.''
- Page 6859, in the first column, under *Estimated Number of Respondents:,* replace ''600'' with ''1,200''.
- Page 6859, in the first column, under *Estimated Total Annual Burden Hours:,* replace ''150'' with ''300''.

Dated: March 20, 2012.

Dawn D. Wolfgang,

Treasury PRA Clearance Officer.

[FR Doc. 2012–7082 Filed 3–23–12; 8:45 am]

BILLING CODE 4830–01–P

DEPARTMENT OF THE TREASURY

Internal Revenue Service

Art Advisory Panel—Notice of Closed Meeting

AGENCY: Internal Revenue Service, Treasury.

ACTION: Notice of Closed Meeting of Art Advisory Panel.

SUMMARY: Closed meeting of the Art Advisory Panel for Fine Art will be held in New York, NY.

DATES: The meeting will be held April 19, 2012.

ADDRESSES: The closed meeting of the Art Advisory Panel will be held on April 19, 2012, beginning at 9:30 a.m.,

at 290 Broadway, Foley Square, New York, NY 10007.

FOR FURTHER INFORMATION CONTACT: Ruth M. Vriend, C:AP:P&V:ART, 999 N. Capitol Street NE., Washington, DC 20003. Telephone (202) 435–5739 (not a toll free number).

SUPPLEMENTARY INFORMATION: Notice is hereby given pursuant to section 10(a)(2) of the Federal Advisory Committee Act, 5 U.S.C. App., that a closed meeting of the Art Advisory Panel will be held on April 19, 2012, beginning at 9:30 a.m., at 290 Broadway, Foley Square, New York, NY 10007.

The agenda will consist of the review and evaluation of the acceptability of fair market value appraisals of works of art involved in Federal income, estate, or gift tax returns. This will involve the discussion of material in individual tax returns made confidential by the provisions of 26 U.S.C. 6103.

A determination as required by section 10(d) of the Federal Advisory Committee Act has been made that this meeting is concerned with matters listed in section 552b(c)(3), (4), (6), and (7), and that the meeting will not be open to the public.

Christopher Wagner,

Chief, Appeals.

[FR Doc. 2012–7106 Filed 3–23–12; 8:45 am]

BILLING CODE 4830–01–P

FEDERAL REGISTER

Vol. 77 Monday,
No. 58 March 26, 2012

Part II

Department of Labor

Occupational Safety and Health Administration

29 CFR 1910, 1915 and 1926
Hazard Communication; Final Rule

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

29 CFR Parts 1910, 1915, and 1926

[Docket No. OSHA–H022K–2006–0062 (formerly Docket No. H022K)]

RIN 1218–AC20

Hazard Communication

AGENCY: Occupational Safety and Health Administration (OSHA), DOL.

ACTION: Final rule.

SUMMARY: In this final rule, OSHA is modifying its Hazard Communication Standard (HCS) to conform to the United Nations' Globally Harmonized System of Classification and Labelling of Chemicals (GHS). OSHA has determined that the modifications will significantly reduce costs and burdens while also improving the quality and consistency of information provided to employers and employees regarding chemical hazards and associated protective measures. Consistent with the requirements of Executive Order 13563, which calls for assessment and, where appropriate, modification and improvement of existing rules, the Agency has concluded this improved information will enhance the effectiveness of the HCS in ensuring that employees are apprised of the chemical hazards to which they may be exposed, and in reducing the incidence of chemical-related occupational illnesses and injuries.

The modifications to the standard include revised criteria for classification of chemical hazards; revised labeling provisions that include requirements for use of standardized signal words, pictograms, hazard statements, and precautionary statements; a specified format for safety data sheets; and related revisions to definitions of terms used in the standard, and requirements for employee training on labels and safety data sheets. OSHA is also modifying provisions of other standards, including standards for flammable and combustible liquids, process safety management, and most substance-specific health standards, to ensure consistency with the modified HCS requirements. The consequences of these modifications will be to improve safety, to facilitate global harmonization of standards, and to produce hundreds of millions of dollars in annual savings.

DATES: This final rule becomes effective on May 25, 2012 Affected parties do not need to comply with the information collection requirements in the final rule until the Department of Labor publishes in the **Federal Register** the control numbers assigned by the Office of Management and Budget (OMB). Publication of the control numbers notifies the public that OMB has approved these information collection requirements under the Paperwork Reduction Act of 1995.

The incorporation by reference of the specific publications listed in this final rule is approved by the Director of the Federal Register as of May 25, 2012.

ADDRESSES: In compliance with 28 U.S.C. 2112(a), the Agency designates Joseph M. Woodward, Associate Solicitor for Occupational Safety and Health, Office of the Solicitor, Room S–4004, U.S. Department of Labor; 200 Constitution Avenue NW., Washington, DC 20210, as the recipient of petitions for review of this final standard.

FOR FURTHER INFORMATION CONTACT: *For general information and press inquiries, contact:* Frank Meilinger, OSHA Office of Communications, Room N–3647, U.S. Department of Labor, 200 Constitution Avenue NW., Washington, DC 20210, telephone (202) 693–1999. *For technical information, contact:* Dorothy Dougherty, Director, Directorate of Standards and Guidance, Room N–3718, OSHA, U.S. Department of Labor, 200 Constitution Avenue NW., Washington, DC 20210; telephone (202) 693–1950.

SUPPLEMENTARY INFORMATION: This final rule modifies the Hazard Communication standard (HCS) and aligns it with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) as established by the United Nations (UN). This action is consistent with Executive Order 13563 and, in particular, with its requirement of ''retrospective analysis of rules that may be outmoded, ineffective, insufficient, or excessively burdensome.'' The preamble to the final rule provides a synopsis of the events leading up to the establishment of the final rule, a detailed description of OSHA's rationale for the necessity of the modification, and final economic and voluntary flexibility analyses that support the Agency's determinations. Also included are explanations of the specific provisions that are modified in the HCS and other affected OSHA standards and OSHA's responses to comments, testimony, and data submitted during the rulemaking. The discussion follows this outline:

I. Introduction
II. Events Leading to the Revised Hazard Communication Standard
III. Overview of the Final Rule and Alternatives Considered
IV. Need and Support for the Revised Hazard Communication Standard
V. Pertinent Legal Authority
VI. Final Economic Analysis and Voluntary Regulatory Flexibility Analysis
VII. OMB Review Under the Paperwork Reduction Act of 1995
VIII. Federalism and Consultation and Coordination With Indian Tribal Governments
IX. State Plans
X. Unfunded Mandates
XI. Protecting Children From Environmental Health and Safety Risks
XII. Environmental Impacts
XIII. Summary and Explanation of the Modifications to the Hazard Communication Standard
(a) Purpose
(b) Scope
(c) Definitions
(d) Hazard Classification
(e) Written Hazard Communication Program
(f) Labels and Other Forms of Warning
(g) Safety Data Sheets
(h) Employee Information and Training
(i) Trade Secrets
(j) Effective Dates
(k) Other Standards Affected
(l) Appendices
XIV. Authority and Signature

The HCS requires that chemical manufacturers and importers evaluate the chemicals they produce or import and provide hazard information to downstream employers and employees by putting labels on containers and preparing safety data sheets. This final rule modifies the current HCS to align with the provisions of the UN's GHS. The modifications to the HCS will significantly reduce burdens and costs, and also improve the quality and consistency of information provided to employers and employees regarding chemical hazards by providing harmonized criteria for classifying and labeling hazardous chemicals and for preparing safety data sheets for these chemicals.

OSHA is required by the Occupational Safety and Health (OSH) Act of 1970 to assure, as far as possible, safe and healthful working conditions for all working men and women. Section 3(8) of the OSH Act (29 U.S.C. 652(8)) empowers the Secretary of Labor to promulgate standards that are ''reasonably necessary or appropriate to provide safe or healthful employment and places of employment.'' This language has been interpreted by the Supreme Court to require that an OSHA standard address a significant risk and reduce this risk significantly. *See Industrial Union Dep't* v. *American Petroleum Institute,* 448 U.S. 607 (1980). As discussed in Sections IV and V of this preamble, OSHA finds that inadequate communication to

employees regarding the hazards of chemicals constitutes a significant risk of harm and estimates that the final rule will reduce this risk significantly.

Section 6(b)(7) of the Act (29 U.S.C. 655(b)(7)) allows OSHA to make appropriate modifications to its hazard communication requirements as new knowledge and techniques are developed. The GHS system is a new approach that has been developed through international negotiations and embodies the knowledge gained in the field of chemical hazard communication since the current rule was first adopted in 1983. As indicated in Section IV of this preamble, OSHA finds that modifying the HCS to align with the GHS will enhance worker protections significantly. As noted in Section VI of this preamble, these modifications to HCS will also result in less expensive chemical hazard management and communication. In this way, the modifications are in line with the requirements of Executive Order 13563 and its call for streamlining of regulatory burdens.

OSHA is also required to determine if its standards are technologically and economically feasible. As discussed in Section VI of this preamble, OSHA has determined that this final standard is technologically and economically feasible.

The Regulatory Flexibility Act, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA), requires OSHA to determine if a regulation will have a significant impact on a substantial number of small entities. As discussed in Section VI, OSHA has determined and certified that this rule will not have a significant impact on a substantial number of small entities.

Executive Orders 13563 and 12866 require OSHA to assess the benefits and costs of final rules and of available regulatory alternatives. Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, reducing costs, harmonizing rules, and promoting flexibility. This rule has been designated an economically significant regulatory action under section 3(f)(1) of Executive Order 12866. Accordingly, the rule has been reviewed by the Office of Management and Budget, and the remainder of this section summarizes the key findings of the analysis with respect to the costs and benefits of the final rule.

Because this final rule modifies the current HCS to align with the provisions of the UN's GHS, the available alternatives to the final rule are somewhat limited. The Agency has qualitatively discussed the two major alternatives to the proposed rule—(1) voluntary adoption of GHS within the existing HCS framework and (2) a limited adoption of specific GHS components—in Section III of this preamble, but quantitative estimates of the costs and benefits of these alternatives could not reasonably be developed. However, OSHA has determined that both of these alternatives would eliminate significant portions of the benefits of the rule, which can only be achieved if the system used in the U.S. is consistently and uniformly applied throughout the nation and in conformance with the internationally harmonized system.

Table SI–1, derived from material presented in Section VI of this preamble, provides a summary of the costs and benefits of the final rule. As shown, the final rule is estimated to prevent 43 fatalities and 521 injuries and illnesses annually. Also as shown, OSHA estimates that the monetized health and safety benefits of the final rule are $250 million annually and that the annualized cost reductions and productivity gains are $507 million annually. In addition, OSHA anticipates that the final rule will generate substantial (but unquantified) savings from simplified hazard communication training and from expanded opportunities for international trade due to a reduction in trade barriers.

The estimated cost of the rule is $201 million annually. As shown in Table SI–1, the major cost elements associated with the final rule include the classification of chemical hazards in accordance with the GHS criteria and the corresponding revision of safety data sheets and labels to meet new format and content requirements ($22.5 million); training for employees to become familiar with new warning symbols and the revised safety data sheet format ($95.4 million); management familiarization and other management-related costs as may be necessary ($59.0 million); and costs to purchase upgraded label printing equipment and supplies or to purchase pre-printed color labels in order to include the hazard warning pictogram enclosed in a red-bordered diamond on the product label ($24.1 million).

The final rule is estimated to generate net monetized benefits of $556 million annually, using a discount rate of 7 percent to annualize costs and benefits. Using a 3 percent discount rate instead would have the effect of lowering the costs to $161 million per year and increasing the gross benefits to $839 million per year. The result would be to increase net benefits from $556 million to $678 million per year.

These estimates are for informational purposes only and have not been used by OSHA as the basis for its decision concerning the requirements for this final rule.

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The point estimates below do not reflect the uncertainties described throughout the analysis. While OSHA is reluctant to provide quantified ranges, OSHA recognizes that these estimates are uncertain. OSHA provides a Sensitivity Analysis on these estimates in Section VI.K of this preamble.

Table SI-1: Annual Benefits, Costs, and Net Benefits of OSHA's Final Hazard Communication Standard (2010 dollars)

Annualized Costs (discounted at 7 percent)	
Reclassification of Chemical Hazards and Revision of SDSs and Labels	$22.5 million
Employee Training	$95.4 million
Management Familiarization and Other Costs	$59.0 million
Printing Packaging and Labels for Hazardous Chemicals in Color	$24.1 million
Total Annualized Costs	$201 million
Annual Health and Safety Benefits	
Number of Non-lost-workday Injuries and Illnesses Prevented	318 (159 -1,590)
Number of Lost Workday Injuries and Illnesses Prevented	203 (101 – 1,015)
Number of Chronic Injuries Prevented	64 (33 – 320)
Number of Fatalities Prevented	43 (22 – 215)
Annualized Benefits	
Monetized Benefits of Reduction in Safety and Health Risks	$250.0 million
Savings from Productivity Improvements for Health and Safety Managers and Logistic Personnel	$475.2 million
Savings from Periodic Updating of SDSs and Labels	$32.2 million
Savings from Simplified Hazard Communication Training	Unquantified
Savings from Reductions in Non-tariff Trade Barriers	Unquantified
OSHA Standards that Are Consistent with International Standards, Consensus Standards, and Standards of Other Federal Agencies	Unquantified
Contribution towards Achieving International Goals Supported by the U.S. Government	Unquantified
Total Annual Monetized Benefits	$757 million ($632 - $1,757 million)
Net Annual Monetized Benefits (Benefits Minus Costs)	$556 million ($431 - $1,556 million)

Source: U.S. Dept. of Labor, OSHA, Directorate of Evaluation and Analysis, Office of Regulatory Analysis, 2011.

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I. Introduction

In the preamble, OSHA refers to supporting materials. References to these materials are given as ''Document ID #'' followed by the last four digits of the document number. The referenced materials are posted in Docket No. OSHA–H022K–2006–0062, which is available at *http://www.regulations.osha.gov;* however, some information (*e.g.,* copyrighted material) is not publicly available to read or download through that Web site. All of the documents are available for inspection and, where permissible, copying at the OSHA Docket Office, U.S. Department of Labor, Room N–2625, 200 Constitution Avenue NW., Washington, DC 20210.

II. Events Leading to the Revised Hazard Communication Standard

The HCS was first promulgated in 1983 and covered the manufacturing sector of industry (48 FR 53280, Nov. 25, 1983). (Please note: The Agency's HCS (29 CFR 1910.1200; 1915.1200; 1917.28; 1918.90; and 1926.59) will be referred to as the ''current HCS'' throughout this rule.) In 1987, the Agency expanded the scope of coverage to all industries where employees are potentially exposed to hazardous chemicals (52 FR 31852, Aug. 24, 1987). Although full implementation in the non-manufacturing sector was delayed by various court and administrative actions, the rule has been fully enforced in all industries regulated by OSHA since March 17, 1989 (54 FR 6886, Feb. 15, 1989) (29 CFR 1910.1200; 1915.1200; 1917.28; 1918.90; and 1926.59). In 1994, OSHA made minor changes and technical amendments to the HCS to help ensure full compliance and achieve better protection of employees (59 FR 6126, Feb. 9, 1994). The development of the HCS is discussed in detail in the preambles to the original and revised final rules (*See* 48 FR at 53280–53281; 52 FR at 31852–31854; and 59 FR at 6127–6131). This discussion will focus on the sequence of events leading to the development of the GHS and the associated modifications to the HCS included in the final rule.

The current HCS requires chemical manufacturers and importers to evaluate the chemicals they produce or import to determine if they are hazardous. The standard provides definitions of health and physical hazards to use as the criteria for determining hazards in the evaluation process. Information about hazards and protective measures is then required to be conveyed to downstream employers and employees through labels on containers and through material safety data sheets, which are now called ''safety data sheets'' (SDS) under the final rule and in this preamble. All employers with hazardous chemicals in their workplaces are required to have a hazard communication program, including container labels, safety data sheets, and employee training. Generally, under the final rule, these obligations on manufacturers, importers, and employers remain, but how hazard communication is to be accomplished has been modified.

To protect employees and members of the public who are potentially exposed to hazardous chemicals during their production, transportation, use, and disposal, a number of countries have developed laws that require information about those chemicals to be prepared and transmitted to affected parties. The laws vary on the scope of chemicals covered, definitions of hazards, the specificity of requirements (*e.g.,* specification of a format for safety data sheets), and the use of symbols and pictograms. The inconsistencies among the laws are substantial enough that different labels and safety data sheets must often be developed for the same product when it is marketed in different nations.

Within the U.S., several regulatory authorities exercise jurisdiction over chemical hazard communication. In addition to OSHA, the Department of Transportation (DOT) regulates chemicals in transport; the Consumer Product Safety Commission (CPSC) regulates consumer products; and the Environmental Protection Agency (EPA) regulates pesticides, as well as exercising other authority over the labeling of chemicals under the Toxic Substances Control Act. Each of these regulatory authorities operates under different statutory mandates, and all have adopted distinct hazard communication requirements.

Tracking and complying with the hazard communication requirements of different regulatory authorities is a burden for manufacturers, importers, distributors, and transporters engaged in commerce in the domestic arena. This burden is magnified by the need to develop multiple sets of labels and safety data sheets for each product in international trade. Small businesses have particular difficulty in coping with the complexities and costs involved. The problems associated with differing national and international requirements were recognized and discussed when the HCS was first promulgated in 1983. At that time, OSHA committed to periodically reviewing the standard in recognition of an interagency trade policy that supported the U.S. pursuing international harmonization of requirements for chemical classification and labeling. The potential benefits of harmonization were noted in the preamble of the 1983 standard:

> * * * [O]SHA acknowledges the long-term benefit of maximum recognition of hazard warnings, especially in the case of containers leaving the workplace which go into interstate and international commerce. The development of internationally agreed standards would make possible the broadest recognition of the identified hazards while avoiding the creation of technical barriers to trade and reducing the costs of dissemination of hazard information by elimination of duplicative requirements which could otherwise apply to a chemical in commerce. As noted previously, these regulations will be reviewed on a regular basis with regard to similar requirements which may be evolving in the United States and in foreign countries. (48 FR at 53287)

OSHA has actively participated in many such efforts in the years since that commitment was made, including trade-related discussions on the need for harmonization with major U.S. trading partners. The Agency issued a Request for Information (RFI) in the **Federal Register** in January 1990, to obtain input regarding international harmonization efforts, and on work being done at that time by the International Labour Organization (ILO) to develop a convention and recommendations on safety in the use of chemicals at work (55 FR 2166, Jan. 22, 1990). On a closely related matter, OSHA published a second RFI in May 1990, requesting comments and information on improving the effectiveness of information transmitted under the HCS (55 FR 20580, May 17, 1990). Possible development of a standardized format or order of information was raised as an issue in the RFI. Nearly 600 comments were received in response to this request. The majority of responses expressed support for a standard safety data sheet format, and the majority of responses that expressed an opinion on the topic favored a standardized format for labels as well.

In June 1992, the United Nations Conference on Environment and Development issued a mandate (Chapter 19 of Agenda 21), supported by the U.S., calling for development of a globally harmonized chemical classification and labeling system:

> A globally harmonized hazard classification and compatible labeling system, including material safety data sheets and easily understandable symbols, should be available, if feasible, by the year 2000.

This international mandate initiated a substantial effort to develop the GHS,

involving numerous international organizations, many countries, and extensive stakeholder representation.

A coordinating group comprised of countries, stakeholder representatives, and international organizations was established to manage the work. This group, the Inter-Organization Programme for the Sound Management of Chemicals Coordinating Group for the Harmonization of Chemical Classification Systems, established overall policy for the work and assigned tasks to other organizations. The Coordinating Group then took the work of these organizations and integrated it to form the GHS. OSHA served as chair of the Coordinating Group.

The work was divided into three main parts: classification criteria for physical hazards; classification criteria for health and environmental hazards (including criteria for mixtures); and hazard communication elements, including requirements for labels and safety data sheets. The criteria for physical hazards were developed by a United Nations Sub-committee of Experts on the Transport of Dangerous Goods/ International Labour Organization working group and were based on the already harmonized criteria for the transport sector. The criteria for classification of health and environmental hazards were developed under the auspices of the Organization for Economic Cooperation and Development. The ILO developed the hazard communication elements. OSHA participated in all of this work, and served as U.S. lead on classification of mixtures and hazard communication.

Four major existing systems served as the primary basis for development of the GHS. These systems were the requirements in the U.S. for the workplace, consumers, and pesticides; the requirements of Canada for the workplace, consumers, and pesticides; European Union directives for classification and labeling of substances and preparations; and the United Nations Recommendations on the Transport of Dangerous Goods. The requirements of other systems were also examined as appropriate, and taken into account as the GHS was developed. The primary approach to reconciling these systems involved identifying the relevant provisions in each system; developing background documents that compared, contrasted, and explained the rationale for the provisions; and undertaking negotiations to find an agreed approach that addressed the needs of the countries and stakeholders involved. Principles to guide the work were established, including an agreement that protections of the existing systems would not be reduced as a result of harmonization. Thus, countries could be assured that the existing protections of their systems would be maintained or enhanced in the GHS.

An interagency committee under the auspices of the Department of State coordinated U.S. involvement in the development of the GHS. In addition to OSHA, DOT, CPSC, and EPA, other agencies were involved that had interests related to trade or other aspects of the GHS process. Different agencies took the lead in various parts of the discussions. Positions for the U.S. in these negotiations were coordinated through the interagency committee. Interested stakeholders were kept informed through email dissemination of information, as well as periodic public meetings. In addition, the Department of State published a notice in the **Federal Register** that described the harmonization activities, the agencies involved, the principles of harmonization, and other information, as well as invited public comment on these issues (62 FR 15951, Apr. 3, 1997). Stakeholders also actively participated in the discussions at the international level and were able to present their views directly in the negotiating process. The GHS was formally adopted by the new United Nations Committee of Experts on the Transport of Dangerous Goods and the Globally Harmonized System of Classification and Labelling of Chemicals in December 2002. In 2003, the adoption was endorsed by the Economic and Social Council of the United Nations. Countries were encouraged to implement the GHS as soon as possible, and have fully operational systems by 2008. This goal was adopted by countries in the Intergovernmental Forum on Chemical Safety, and was endorsed by the World Summit on Sustainable Development. The U.S. participated in these groups, and agreed to work toward achieving these goals.

OSHA published an Advance Notice of Proposed Rulemaking (ANPR) on the GHS in September of 2006 (71 FR 53617, Sept. 12, 2006). At the same time the ANPR was published, OSHA made available on its Web site a document summarizing the GHS (*http://www.osha.gov*). The ANPR provided information about the GHS and its potential impact on the HCS, and sought input from the public on issues related to GHS implementation. Over 100 responses were received, and the comments and information provided were taken into account in the development of the modifications to the HCS included in the September 2009 Notice of Proposed Rulemaking (NPRM) (74 FR 50279–50549, Sept. 30, 2009). A notice of correction was published on November 5, 2009, in order to correct misprints in the proposal (74 FR 57278, Nov. 5, 2009). Over 100 comments were received in response to the NPRM. Commenters represented the broad spectrum of affected parties and included government agencies, industries, professional and trade associations, academics, employee organizations and individuals. Public hearings were held in Washington, DC, from March 2 through March 5, 2010, and in Pittsburgh, PA, on March 31, 2010. Over 40 panels participated in the hearings. The comments, testimony, and other data received regarding this rulemaking were overwhelmingly favorable, and will be discussed in detail later in this preamble. The final post-hearing comment period for further submissions and briefs ended and the record was certified by Administrative Law Judge Stephen L. Purcell and closed on May 31, 2010. Executive Order 13563, emphasizing the importance of retrospective analysis of rules, was issued on January 18, 2011.

This final rule is based on Revision 3 of the GHS. The adoption of the GHS will improve OSHA's current HCS standard by providing consistent, standardized hazard communication to downstream users. However, even after the U.S. and other countries implement the GHS, it will continue to be updated in the future. These updates to the GHS will be completed as necessary to reflect new technological and scientific developments as well as provide additional explanatory text. Any future changes to the HCS to adopt subsequent changes to the GHS would require OSHA's rulemaking procedures.

OSHA will remain engaged in activities related to the GHS. The U.S. is a member of the United Nations Committee of Experts on the Transport of Dangerous Goods and the Globally Harmonized System of Classification and Labelling of Chemicals, as well as the Sub-committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals, where OSHA is currently the Head of the U.S. Delegation. These permanent UN bodies have international responsibility for maintaining, updating as necessary, and overseeing the implementation of the GHS. OSHA and other affected Federal agencies actively participate in these UN groups. In addition, OSHA will also continue to participate in the GHS Programme Advisory Group under the United Nations Institute for Training and Research (UNITAR). UNITAR is

responsible for helping countries implement the GHS, and has ongoing programs to prepare guidance documents, conduct regional workshops, and implement pilot projects in a number of nations. OSHA will also continue its involvement in interagency discussions related to coordination of domestic implementation of the GHS, and in discussions related to international work to implement and maintain the GHS.

III. Overview of the Final Rule and Alternatives Considered

Based on consideration of the record as a whole, OSHA has modified the HCS to make it consistent with the GHS. OSHA finds that harmonizing the HCS with the GHS will improve worker understanding of the hazardous chemicals they encounter every day. Such harmonization will also reduce costs for employers.

OSHA believes that adopting the GHS will result in a clearer, more effective methodology for conveying information on hazardous chemicals to employers and employees. Commenters overwhelmingly supported the revision, and their submissions form a strong evidentiary basis for this final rule. The American Health Care Association stated that the GHS ''would enhance the effectiveness of the HCS in ensuring that employees are apprised of the chemical hazards to which they might be exposed'' (Document ID #0346). The National Institute of Environmental Health Sciences concurred, and added that adopting the GHS ''would provide better worker health and safety protections'' (Document ID #0347). (*See also* Document ID #0303, 0313, 0322, 0324, 0327, 0328, 0329, 0330, 0331, 0334, 0335, 0336, 0339, 0340, 0341, 0344, 0345, 0346, 0347, 0349, 0350, 0351, 0352, 0353, 0354, 0356, 0357, 0359, 0363, 0365, 0367, 0369, 0370, 0371, 0372, 0374, 0375, 0376, 0377, 0378, 0379, 0381, 0382, 0383, 0385, 0386, 0387, 0388, 0389, 0390, 0392, 0393, 0396, 0397, 0399, 0400, 0402, 0403, 0404, 0405, 0407, 0408, 0409, 0410, 0411, 0412, 0414, 0417, 0453, 0456, 0461, and 0463.)

Consistent with Executive Order 13563, OSHA has concluded that the revision significantly improves the current HCS standard. Moreover, there is widespread agreement that aligning the HCS with the GHS would establish a valuable, systematic approach for employers to evaluate workplace hazards, and provide employees with consistent information regarding the hazards they encounter. A member of the United Steel Workers aptly summed up the revision by stating that ''the HCS in 1983 gave the workers the 'right to know' but the GHS will give the workers the 'right to understand' '' (Document ID #0403). The American Society of Safety Engineers (ASSE) concurred, stating that adoption of the HCS was ''necessary to help this nation's workers deal with the increasingly difficult challenge of understanding the hazards and precautions needed to handle and use chemicals safely in an increasingly connected workplace'' (Document ID #0336). Phlymar, ORC, BCI, 3M, American Iron & Steel Institute, and the North American Metals Council (NAMC) all agreed that the adoption of the GHS would improve the quality and consistency of information and the effectiveness of hazard communication (Documents ID #0322, 0336, 0339, 0370, 0377, 0390, 0405, and 0408). (*See also* Document ID #0327, 0338, 0339, 0346, 0347, 0349, 0351, 0354, 0363, 0365, 0370, 0372, 0374, 0379, 0389, 0390, 0397, 0405, 0408, and 0414.) The evidence supporting the Agency's conclusions is discussed more thoroughly below in Sections IV, V, and VI; the revisions to the HCS are discussed in detail in Section XIII.

This section of the preamble provides an overview of the current HCS and how the adoption of the GHS will change this standard. Moreover, this section will also discuss the alternatives to mandatory implementation and the benefits of the final rule. The specific issues for which OSHA solicited comments in the NPRM will be discussed within their respective sections.

1. The Hazard Communication Standard

The HCS requires a comprehensive hazard evaluation and communication process, aimed at ensuring that the hazards of all chemicals are evaluated, and also requires that the information concerning chemical hazards and necessary protective measures is properly transmitted to employees. The HCS achieves this goal by requiring chemical manufacturers and importers to review available scientific evidence concerning the physical and health hazards of the chemicals they produce or import to determine if they are hazardous. For every chemical found to be hazardous, the chemical manufacturer or importer must develop a container label and an SDS, and provide both documents to downstream users of the chemical. All employers with employees exposed to hazardous chemicals must develop a hazard communication program, and ensure that exposed employees are provided with labels, access to SDSs, and training on the hazardous chemicals in their workplace.

There are three information communication components in this system—labels, SDSs, and employee training, all of which are essential to the effective functioning of the program. Labels provide a brief, but immediate and conspicuous, summary of hazard information at the site where the chemical is used. SDSs provide detailed technical information and serve as a reference source for exposed employees, industrial hygienists, safety professionals, emergency responders, health care professionals, and other interested parties. Training is designed to ensure that employees understand the chemical hazards in their workplace and are aware of protective measures to follow. Labels, SDSs, and training are complementary parts of a comprehensive hazard communication program—each element reinforces the knowledge necessary for effective protection of employees. Information required by the HCS reduces the incidence of chemical-related illnesses and injuries by enabling employers and employees to implement protective measures in the workplace. Employers can select less hazardous chemical alternatives and ensure that appropriate engineering controls, work practices, and personal protective equipment are in place. Improved understanding of chemical hazards by supervisory personnel results in safer handling of hazardous substances, as well as proper storage and housekeeping measures.

Employees provided with information and training on chemical hazards are able to fully participate in the protective measures instituted in their workplaces. Knowledgeable employees can take the steps required to work safely with chemicals, and are able to determine what actions are necessary if an emergency occurs. Information on chronic effects of exposure to hazardous chemicals helps employees recognize signs and symptoms of chronic disease and seek early treatment. Information provided under the HCS also enables health and safety professionals to provide better services to exposed employees. Medical surveillance, exposure monitoring, and other services are enhanced by the ready availability of health and safety information. The modifications that make up this final rule build on these core principles by establishing a more detailed and consistent classification system and requiring uniform labels and SDSs, which will better ensure that workers are informed and adequately protected from chemical exposures.

2. Current HCS Provisions for Classification, Labeling, and SDSs

The current HCS covers a broad range of health and physical hazards. The standard is performance-oriented, providing definitions of hazards and parameters for evaluating the evidence to determine whether a chemical is considered hazardous. The evaluation is based upon evidence that is currently available, and no testing of chemicals is required.

The current standard covers every type of health effect that may occur, including both acute and chronic effects. Definitions of a number of adverse health effects are provided in the standard. These definitions are indicative of the wide range of coverage, but are not exclusive. Mandatory Appendix A of the current standard lists criteria for specific health effects; however, it also notes that these criteria are not intended to be an exclusive categorization scheme, but rather any available scientific data on the chemical must be evaluated to determine whether the chemical presents a health hazard. Any adverse health effect that is substantiated by a study conducted according to established scientific principles, and reporting a statistically significant outcome, is sufficient for determining that a chemical is hazardous under the rule.

Most chemicals in commerce are not present in the pure state (*i.e.,* as individual elements or compounds), but are ingredients in mixtures of chemicals. Evaluation of the health hazards of mixtures is based on data for the mixture as a whole when such data are available. When data on the mixture as a whole are not available, the mixture is considered to present the same health hazards as any ingredients present at a concentration of 1% or greater, or, in the case of carcinogens, concentrations of 0.1% or greater. The current HCS also recognizes that risk may remain at concentrations below these cut-offs, and where there is evidence that that is the case, the mixtures are considered hazardous under the standard.

The current HCS establishes requirements for minimum information that must be included on labels and SDSs, but does not provide specific language to convey the information or a format in which to provide it. When the current HCS was issued in 1983, the public record strongly supported this performance-oriented approach (*See* 48 FR at 53300–53310). Many chemical manufacturers and importers were already providing information voluntarily, and in the absence of specific requirements had developed their own formats and approaches. The record indicated that a performance-oriented approach would reduce the need for chemical manufacturers and importers to revise these existing documents to comply with the HCS, thus reducing the cost impact of the standard.

3. GHS Provisions for Classification, Labeling, and SDSs

The GHS is an internationally harmonized system for classifying chemical hazards and developing labels and safety data sheets. However, the GHS is not a model standard that can be adopted verbatim. Rather, it is a set of criteria and provisions that regulatory authorities can incorporate into existing systems, or use to develop new systems.

The GHS allows a regulatory authority to choose the provisions that are appropriate to its sphere of regulation. This is referred to as the ''building block approach.'' The GHS includes all of the regulatory components, or building blocks, that might be needed for classification and labeling requirements for chemicals in the workplace, transport, pesticides, and consumer products. This rule only adopts those sections of the GHS that are appropriate to OSHA's regulatory sector. For example, while the GHS includes criteria on classifying chemicals for aquatic toxicity, these provisions were not adopted because OSHA does not have the regulatory authority to address environmental concerns. The building block approach also gives regulatory agencies the authority to select which classification criteria and provisions to adopt. OSHA is adopting the classification criteria and provisions for labels and SDSs, because the current HCS covers these elements. Broad criteria were established for the GHS in order to allow regulatory bodies to apply the same standards to a wide array of hazards. The building block approach may also be applied to the criteria for defining hazard categories. As a result, the GHS criteria are more comprehensive than what was in the current HCS, and OSHA did not need to incorporate all of the GHS hazard categories into this final rule.

Under the GHS, each hazard or endpoint (*e.g.,* Explosives, Carcinogenicity) is considered to be a hazard class. The classes are generally sub-divided into categories of hazard. For example, Carcinogenicity has two hazard categories. Category one is for known or presumed human carcinogens while category two encompasses suspected human carcinogens. The definitions of hazards are specific and detailed. For example, under the current HCS, a chemical is either an explosive or it is not. The GHS has seven categories of explosives, and assignment to these categories is based on the classification criteria provided. In order to determine which hazard class a mixture falls under, the GHS generally applies a tiered approach. When evaluating mixtures, the first step is consideration of data on the mixture as a whole. The second step allows the use of ''bridging principles'' to estimate the hazards of the mixture based on information about its components. The third step of the tiered approach involves use of cut-off values based on the composition of the mixture or, for acute toxicity, a formula that is used for classification. The approach is generally consistent with the requirements of the pre-modified HCS, but provides more detail and specification and allows for extrapolation of data available on the components of a mixture to a greater extent—particularly for acute effects.

Hazard communication requirements under the GHS are directly linked to the hazard classification. For each class and category of hazard, a harmonized signal word (*e.g.,* Danger), pictogram (*e.g.,* skull and crossbones), and hazard statement (*e.g.,* Fatal if Swallowed) must be specified. These specified elements are referred to as the core information for a chemical. Thus, once a chemical is classified, the GHS provides the specific core information to convey to users of that chemical. The core information allocated to each category generally reflects the degree or severity of the hazard.

Precautionary statements are also required on GHS labels. The GHS provides precautionary statements; while they have been codified (numbered), they are not yet considered formally harmonized. In other words, regulatory authorities may choose to use different language for the precautionary statements and still be considered to be harmonized with the GHS. The GHS has codified these statements (*i.e.,* assigned numbers to them) as well as aligned them with the hazard classes and categories. Codification allows the precautionary statements to be referenced in a shorthand form and makes it easier for authorities using them in regulatory text to organize them. In addition, there are provisions to allow inclusion of supplementary information so that chemical manufacturers can provide data in addition to the specified core information.

The GHS establishes a standardized 16-section format for SDSs to provide a consistent sequence for presentation of information to SDS users. Items of

primary interest to exposed employees and emergency responders are presented at the beginning of the document, while more technical information is presented in later sections. Headings for the sections (*e.g.,* First-aid measures, Handling and storage) are standardized to facilitate locating information of interest. The harmonized data sheets are consistent with the order of information included in the voluntary industry consensus standard for safety data sheets (ANSI Z400.1).

4. Revisions to the Hazard Communication Standard

The GHS uses an integrated, comprehensive process of identifying and communicating hazards, and the GHS modifications improve the HCS by providing more extensive criteria for defining the hazards in a consistent manner, as well as standardizing label elements and SDS formats to help to ensure that the information is conveyed consistently. The GHS does not include requirements for a written hazard communication program, and this final rule does not make substantive changes to the current HCS requirements for a written hazard communication program. Nor does the GHS impose employee training requirements; however, OSHA believes that additional training will be necessary to ensure that employees understand the new elements, particularly on the new pictograms. Therefore, modified training requirements have been included in the final rule in order to address the new label elements and SDS format required under this revised standard.

a. Modifications

The revised HCS primarily affects manufacturers and importers of hazardous chemicals. Pursuant to the final rule, chemical manufacturers and importers are required to re-evaluate chemicals according to the new criteria in order to ensure the chemicals are classified appropriately. For health hazards, this will involve assigning the chemical both to the appropriate hazard category and subcategory (called hazard class). For physical hazards, these new criteria are generally consistent with current DOT requirements for transport. Therefore, if the chemicals are transported (*i.e.,* they are not produced and used in the same workplace), this classification should already be done to comply with DOT's transport requirements. This will minimize the work required for classifying physical hazards under the revised rule.

Preparation and distribution of modified labels and safety data sheets by chemical manufacturers and importers will also be required. However, those chemical manufacturers and importers following the ANSI Z400.1 standard for safety data sheets should already have the appropriate format, and will only be required to make some small modifications to the content of the sheets to be in compliance with the final rule.

Using the revised criteria, a chemical will be classified based on the type, the degree, and the severity of the hazard it poses. This information will help employers and employees understand chemical hazards and identify and implement protective measures. The detailed criteria for classification will result in greater accuracy in hazard classification and more consistency among classifiers. Uniformity will be a key benefit; by following the detailed criteria, classifiers are less likely to reach different interpretations of the same data.

b. Specific Changes From the Proposal

Based on comments from the rulemaking effort, OSHA has made some modifications from the proposal to the final rule. These changes were the result of OSHA's analysis of the comments and data received from interested parties who submitted comments or participated in the public hearings. The major changes are summarized below and are discussed in the Summary and Explanation Section of this Preamble (Section XIII).

Safety Data Sheet

In the proposal, OSHA asked interested parties to comment on whether OSHA's permissible exposure limits (PELs) should be included on SDSs, as well as any other exposure limit used or recommended by the chemical manufacturer, importer, or employer who prepares SDSs. After reviewing and analyzing the comments and testimony, OSHA has decided not to modify the HCS with regard to the American Conference of Government Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs) and so will continue to require ACGIH TLVs on SDSs. We have also retained the classification listings of the International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP) on SDSs. As explained more fully in the Summary and Explanation, OSHA finds that requiring ACGIH TLVs as well as the IARC and NTP classification listings on the SDS will provide employers and employees with useful information to help them assess the hazards presented by their workplaces.

Labels

As discussed in the NPRM, the GHS gives individual countries the option of using black, rather than red, borders around pictograms for labels used in domestic commerce. OSHA proposed requiring red frames for all labels, domestic and international. The final rule carries forward this requirement. As discussed in Sections IV and XIII, studies showed that there is substantial benefit to the use of color on the label. The color red in particular will make the warnings on labels more noticeable, because red borders are generally perceived to reflect the greatest degree of hazard. Further, while commenters who objected to this requirement cited the cost of printing in red ink as a reason to allow domestic use of black borders, OSHA was unconvinced that the costs involved made the provision infeasible, excessively burdensome, or warranted the diminished protection provided by black borders. (*See* Sections VI and XIII below.)

One option suggested by commenters was requiring a red label but allowing manufacturers and importers to use preprinted labels with multiple red frames. This would save costs because the preprinted label stock could be used for different products requiring different pictograms. Use of this option, however, would mean that the label for a particular chemical might have empty red frames if the chemical did not require as many pictograms as there were red frames on the label stock.

As explained in Sections IV and XIII, OSHA has concluded that a red border without a pictogram can create confusion and draw worker attention away from the appropriate hazard warnings (*See* Section IV for more detail). Additionally, OSHA is concerned that empty red borders might be inconsistent with DOT regulations (*See* 49 CFR 172.401). Therefore, while OSHA is not opposed to the use of preprinted stock, OSHA has decided not to allow the use of blank red frames on finished labels.

Hazard Classification

Another change to the final rule is the inclusion of the IARC and NTP as resources for determining carcinogenicity. Commenters generally supported this modification, and OSHA believes the inclusion of this information will assist evaluators with the classification process. Therefore, descriptions of both the IARC and NTP classification criteria have been added to Appendix F, and IARC and NTP classifications may be used to determine

whether a chemical should be classified as a carcinogen.

Unclassified Hazards

OSHA has made several modifications to clarify and specify the definition for unclassified hazards, based on the comments provided. Executive Order 13563 states that our regulatory system ''must promote predictability and reduce uncertainty,'' and these efforts at clarification are designed to achieve that goal. OSHA included this definition to preserve existing safeguards under requirements of the HCS for chemical manufacturers and importers to disseminate information on hazardous chemicals to downstream employers, and for all employers to provide such information to potentially exposed employees. Inclusion of the definition does not create new requirements. OSHA has made certain changes to clarify application of the definition, and to ensure that the relevant provisions do not create confusion or impose new burdens.

In order to minimize confusion, OSHA has renamed unclassified hazards, ''hazards not otherwise classified.'' More fundamentally, and in response to the majority of the comments on this issue, OSHA has removed from the coverage of the general definition the hazards identified in the NPRM as not currently classified under the GHS criteria. These hazards are: pyrophoric gases, simple asphyxiants, and combustible dust. As described below, OSHA has added definitions to the final rule for pyrophoric gases and simple asphyxiants, and provided guidance on defining combustible dust for purposes of complying with the HCS. In addition, the Agency has also provided standardized label elements for these hazardous effects.

Precautionary/Hazard Statements

In response to concerns by commenters that, on occasion, a specified precautionary statement might not be appropriate, OSHA modified mandatory Appendix C to provide some added flexibility. Where manufacturers, importers, or responsible parties can show that a particular statement is inappropriate for the product, that precautionary statement may be omitted from the label. This is discussed in more detail in section XIII below.

Other Standards Affected

Changing the HCS to conform to the GHS requires modification of other OSHA standards. For example, modifications have been made to the standards for Flammable and Combustible Liquids in general industry (29 CFR 1910.106) and construction (29 CFR 1926.152) to align the requirements of the standards with the GHS hazard categories for flammable liquids. Modifications to the Process Safety Management of Highly Hazardous Chemicals standard (29 CFR 1910.119) will ensure that the scope of the standard is not changed by the revisions to the HCS. In addition, modifications have been made to most of OSHA's substance-specific health standards, ensuring that requirements for signs and labels and SDSs are consistent with the modified HCS.

Effective Dates

In the proposal, OSHA solicited comments regarding whether it would be feasible for employers to train employees regarding the new labels and SDSs within two years after publication of the final rule. Additionally, OSHA inquired as to whether chemical manufacturers, importers, distributors, and employers would be able to comply with all the provisions of the final rule within three years, and whether a phase-in period was necessary.

OSHA received many comments and heard testimony regarding the effective dates which are discussed in detail in Section XIII below. First, after analysis of the record, the Agency has determined that covered employers must complete all training regarding the new label elements and SDS format by December 1, 2013 since, as supported by record, employees will begin seeing the new style labels considerably earlier than the compliance date for labeling. Second, OSHA is requiring compliance with all of the provisions for preparation of new labels and safety data sheets by June 1, 2015. However, distributors will have an additional six months (by December 1, 2015) to distribute containers with manufacturers' labels in order to accommodate those they receive very close to the compliance date. Employers will also be given an additional year (by June 1, 2016) to update their hazard communication programs or any other workplace signs, if applicable.

Additionally, OSHA has decided not to phase in compliance based on whether a product is a substance or a mixture. OSHA has concluded that adequate information is available for classifiers to use to classify substances and mixtures. Finally, as discussed in the NPRM, employers will be considered to be in compliance with the HCS during the transition period as long as they are complying with either the existing HCS (as it appears in the CFR as of October 1, 2011) or this revised HCS. A detailed discussion regarding the effective dates is in Section XIII.

5. Alternatives of Mandatory Implementation

In the NPRM, OSHA proposed several alternatives to mandatory implementation of the GHS in response to concerns raised by commenters through the ANPR (74 FR at 50289). Commenters generally supported the concept of adopting the GHS as it was proposed. However, a few commenters indicated that they were concerned with what they saw as the cost burden on small businesses that are not involved in international trade. To address these concerns, OSHA solicited comments in the NPRM on several options proposed by the Agency regarding alternatives to mandatory harmonization. The following is a discussion of these alternatives; the potential impact and the response from participants in the rulemaking regarding the relative benefit, feasibility, impact on small business; and the impact on worker safety and health.

The first alternative OSHA proposed was to facilitate voluntary adoption of GHS within the existing HCS framework, and give manufacturers and importers the option to use the current HCS or the GHS system. This option would have permitted companies to decide whether they wanted to comply with the existing standard or with the GHS. A variation of this alternative was also proposed that would have adopted the GHS with an exemption allowing small chemical producers to continue to use the HCS, even after this GHS-modified HCS is promulgated.

The second alternative was a limited adoption of specific GHS components. Under this approach, producers could either comply with the GHS or a modified HCS that would retain the current HCS hazard categories, but require standardized hazard statements, signal words, and precautionary statements. A variation of this alternative would have omitted mandatory precautionary statements.

Commenters almost universally objected to both of the alternatives listed above (Document ID #0324, 0328, 0329, 0330, 0335, 0338, 0339, 0341, 0344, 0351, 0352, 0355, 0365, 0370, 0377, 0381, 0382, 0385, 0387, 0389, 0393, 0495, 0403, 0404, and 0412). American Industrial Hygiene Association (AIHA), in a representative comment, stated that ''permitting voluntary use of some of the system * * * or exempting certain sectors based on business size or other criteria [would] defeat the purpose of revising this standard and of the GHS'' (Document ID #0365). Additionally, the

Compressed Gas Association stated they ''would not support any alternative approach as it would defeat the goal of global hazard communication coordination'' (Document ID #0324).

Many commenters argued that a dual system that permitted businesses to opt out of complying with the GHS would undermine the key benefits of implementation. For example, Ferro Corporation stated that ''for GHS to be effective and efficient in the U.S., implementation should be consistent and congruent'' (Document ID #0363). DuPont Company argued ''dual systems would be confusing for employers'' (Document ID #0329). ORC also rejected voluntary implementation, reasoning that ''consistent requirements for all manufacturers and importers of chemicals [are] needed to maximized efficiency in the chemical supply chain'' (Document ID #0370). Additionally, the AFL–CIO cited consistent hazard information for workers and employers as the core objective of this rulemaking (Document ID #0340).

The commenters who supported GHS as proposed indicated that consistency was an essential aspect of this rule. Stericycle, Inc., stated that SDSs which ''do not follow a consistent format would cause issues in understanding and implementing the controls to limit exposure and protect employee safety and health,'' and argued that exemptions from GHS requirements would ''shift the burden from the chemical industry to all employers'' (Document ID #0338). Additionally, commenters did not support exempting small businesses from adopting the GHS. Ecolab argued that ''large and small businesses use each others' products'' and are inextricably linked, and they indicated that voluntary adoption ''could cause confusion about product hazards if two identical products are labeled differently due solely to the size of the business from which [they are] obtained'' (Document ID #0351).

OSHA agrees that the first alternative is unworkable as even one business's adoption of one of the alternatives would affect other companies. As stated in the comments above, if small businesses do not adopt the GHS, then large businesses or distributors will either have to generate GHS classifications for chemicals purchased, or request that small businesses supply data and labels using GHS classifications. Likewise, chemical producers often provide their products to distributors who then sell them to customers who are unknown to the original producer. This would lead to a plethora of product labels, a situation that is bound to make hazard communication far more difficult.

Commenters specifically cited issues with safety as their basis for rejecting the first proposed alternative. The AIHA (Document ID #0365) stated:

> If employers and employees cannot have confidence that labels and MSDSs provide a consistent safety message superficial standardization will not improve safety. Safety is also seriously compromised if different hazard communication systems are present in the work area. Effective training is not possible if pictograms and hazard statements are not used in a consistent manner * * *. All of the approaches discussed will create competitive pressures that can affect classification decisions and make good and consistent hazard communication more difficult.

North American Metal Council argued that the alternative would penalize workers of small business, and asserted that a ''worker's right to know about chemical hazards, should not depend on the source of a chemical or the size of the worker's employer'' (Document ID #0337).

Moreover, commenters asserted that the benefits derived from the harmonized labeling of chemicals would be significantly diluted if employers were not uniformly required to adopt the GHS. United Steel Workers Union aptly reiterated that the primary benefit of adopting the GHS is not the facilitation of international trade, but rather is the protection of workers, which is ''best accomplished through a uniform system of classification leading to comprehensible hazard information'' (Document ID #0403). (*See also* Document ID #0339, 0351, 0376, 0377, 0382, and 0412.)

Several commenters supported the voluntary adoption of the GHS (Document ID #0355, 0389, and 0502). For example, Intercontinental Chemical Corporation supported voluntary adoption for companies not involved in international trade (Document ID #0502). Additionally, Betco supported allowing ''small businesses that market domestically'' to retain the current HCS and suggested that ''voluntary adoption would not be any less protective for employees or create confusion'' (Document ID #0389).

OSHA acknowledges that small chemical manufacturers will have some burdens associated with the adoption of GHS. However, employees who use products produced by small employers are entitled to the same protections as those who use products produced by companies engaged in international trade. The confusion created by two or more competing systems would undermine the consistency of hazard communication achievable by a GHS-modified HCS. Moreover, whether or not a product will wind up in international trade may not be known to the manufacturer or even the first distributer. A producer may provide a chemical to another company, which then formulates it into a product that is sold internationally. Thus, the original producer is involved in international trade without necessarily realizing it. For these reasons, OSHA has determined that, in order to achieve a national, consistent standard, all businesses must be required to adhere to the revised HCS.

OSHA concludes that the rulemaking record does not support adoption of the first alternative. The majority of private industry, unions, and professional organizations did not support this approach, arguing persuasively that piecemeal adoption would undermine the benefits of harmonization. As discussed above, while improvements to international trade are a benefit of this rulemaking; they are not the primarily intended benefit. OSHA believes that implementation of the GHS, without exceptions based on industry or business size, will enhance worker safety through providing consistent hazard communication and, consequently, safe practices in the workplace. However, as indicated above, OSHA does recognize that there are burdens with any change and as discussed in Section XIII, OSHA will use the input OSHA has received to the record to develop an outreach plan for additional guidance.

The second alternative, a halfway measure allowing businesses to adopt some of the features of a GHS-modified HCS but not requiring adoption of others, drew little interest or comment from the participants. OSHA has concluded that this alternative, which would have led to even more inconsistencies in hazard communication, is not a viable alternative. OSHA's conclusion is supported by the overwhelming number of commenters who spoke out against the first option and strongly supported the proposed standard. Allowing employers to adopt, say, only the provisions for the labels or safety data sheets will result in inconsistent use of the standardized hazard statement, signal word, and precautionary statement without clear direction on when they would be required, a situation that is sure to compromise safety in the workplace. Therefore, OSHA has concluded that implementation of the GHS is also preferable to the second alternative.

Pursuant to its analysis of the entire rulemaking record, OSHA has decided to adopt the GHS as proposed and is not incorporating any of the alternatives into this final rule. The adoption of any of the alternatives would undermine the key benefits associated with the GHS. OSHA has concluded, as discussed in Section V, that the adoption of GHS as proposed will strengthen and refine OSHA's hazard communication system, leading to safer workplaces.

IV. Need and Support for the Modifications to the Hazard Communication Standard

Chemical exposure can cause or contribute to many serious adverse health effects such as cancer, sterility, heart disease, lung damage, and burns. Some chemicals are also physical hazards and have the potential to cause fires, explosions, and other dangerous incidents. It is critically important that employees and employers are apprised of the hazards of chemicals that are used in the workplace, as well as the associated protective measures. This knowledge is needed to understand the precautions necessary for safe handling and use, to recognize signs and symptoms of adverse health effects related to exposure when they do occur, and to identify appropriate measures to be taken in an emergency.

OSHA established the need for disclosure of chemical hazard information when the Hazard Communication Standard (HCS) was issued in 1983 (48 FR 53282–53284, Nov. 25, 1983). As noted in the NPRM (74 FR 50291, Sept. 30, 2009), this need continues to exist. The Agency estimates that 880,000 hazardous chemicals are currently used in the U.S., and over 40 million employees are now potentially exposed to hazardous chemicals in over 5 million workplaces. During the September 29, 2009, press conference announcing the publication of the HCS NPRM, Deputy Assistant Secretary of Labor for Occupational Safety and Health, Jordan Barab, discussed the impact that the HCS has had on reducing injury and illness rates. Mr. Barab stated that, since the HCS's original promulgation in 1983, ''OSHA estimates that chemically-related acute injuries and illness [have] dropped at least 42%.'' Reiterating information from OSHA's preliminary economic analysis in the NPRM, Mr. Barab also stated:

> [T]here are still workers falling ill or dying from exposure to hazardous chemicals. OSHA estimates, based on BLS data, that more than 50,000 workers became ill and 125 workers died due to acute chemical exposure in 2007. These numbers are dwarfed by chronic illnesses and fatalities that are estimated in the tens of thousands.
>
> OSHA believes that aligning the Hazard Communication Standard with the provisions of the GHS will improve the effectiveness of the standard and help to substantially improve worker safety and health. The GHS will provide a common system for classifying chemicals according to their health and physical hazards and it will specify hazard communication elements for labeling and safety data sheets.

Data collected and analyzed by the Agency also reflect this critical need to improve hazard communication. Chemical exposures result in a substantial number of serious injuries and illnesses among exposed employees. The Bureau of Labor Statistics estimates that employees suffered 55,400 illnesses that could be attributed to chemical exposures in 2007, the latest year for which data are available (BLS, 2008). In that same year, 17,340 chemical-source injuries and illnesses involved days away from work (BLS, 2009).

The BLS data, however, do not indicate the full extent of the problem, particularly with regard to illnesses. As noted in the preamble to the HCS in 1983, BLS figures probably only reflect a small percentage of the incidents occurring in exposed employees (48 FR 53284, Nov. 25, 1983). Many occupational illnesses are not reported because they are not recognized as being related to workplace exposures, are subject to long latency periods between exposure and the manifestation of disease, and other factors (*e.g.,* Herbert and Landrigan, 2000, Document ID #0299; Leigh *et al.,* 1997, Document ID #0274; Landrigan and Markowitz, 1989, Document ID #0299).

While the current HCS serves to ensure that information concerning chemical hazards and associated protective measures is provided to employers and employees, the Agency has determined that the revisions adopted in this final rule will substantially improve the quality and consistency of the required information. OSHA believes these revisions to the HCS, which align it with the GHS, will enhance workplace protections significantly. Better information will enable employers and employees to increase their recognition and knowledge of chemical hazards and take measures that will reduce the number and severity of chemical-related injuries and illnesses.

A key foundation underlying this belief relates to the comprehensibility of information conveyed under the GHS. All hazard communication systems deal with complicated scientific information being transmitted to largely non-technical audiences. During the development of the GHS, in order to construct the most effective hazard communication system, information about and experiences with existing systems were sought to help ensure that the best approaches would be used. Ensuring the comprehensibility of the GHS was a key principle during its development. As noted in a **Federal Register** notice published by the U.S. Department of State (62 FR 15956, April 3, 1997): ''A major concern is to ensure that the requirements of the globally harmonized system address issues related to the comprehensibility of the information conveyed.'' This concern is also reflected in the principles of harmonization that were used to guide the negotiations and discussions during the development of the GHS. As described in Section 1.1.1.6(g) of the GHS, the principles included the following: ''[T]he comprehension of chemical hazard information, by the target audience, *e.g.,* workers, consumers and the general public should be addressed.''

As was discussed in the proposal (74 FR 50291), to help in the development of the GHS, OSHA had a review of the literature conducted to identify studies on effective hazard communication, and made the review and the analysis of the studies available to other participants in the GHS process. One such study, prepared by researchers at the University of Maryland, entitled ''Hazard Communication: A Review of the Science Underpinning the Art of Communication for Health and Safety'' (Sattler *et al.,* 1997, Document ID #0191) has also long been available to the public on OSHA's Hazard Communication web page. Additionally, OSHA conducted an updated review of the literature published since the 1997 review. This updated review examined the literature relevant to specific hazard communication provisions of the GHS (ERG, 2007, Document ID #0246).

Further work related to comprehensibility was conducted during the GHS negotiations by researchers in South Africa at the University of Cape Town—the result is an annex to the GHS on comprehensibility testing (*See* GHS Annex 6, Comprehensibility Testing Methodology) (United Nations, 2007, Document ID #0194). Such testing has been conducted in some of the developing countries preparing to implement the GHS, and has provided these countries with information about which areas in the GHS will require more training in their programs to

ensure people understand the information. The primary purpose of these activities was to ensure that the system developed was designed in such a way that the messages would be effectively conveyed to the target audiences, with the knowledge that the system would be implemented internationally in different cultures with varying interests and concerns.

Another principle that was established to guide development of the GHS was the agreement that levels of protection offered by an existing hazard communication system should not be reduced as a result of harmonization. Following these principles, the best aspects of existing systems were identified and included in a single, harmonized approach to classification, labeling, and development of SDSs.

The GHS was developed by a large group of experts representing a variety of perspectives. Over 200 experts provided technical input on the project. The United Nations Sub-Committee of Experts on the GHS, the body that formally adopted the GHS and is now responsible for its maintenance, includes 35 member nations as well as 14 observer nations. Authorities from these member states are able to convey the insight and understanding acquired by regulatory authorities in different sectors, and to relate their own experiences in implementation of hazard communication requirements. In addition, over two dozen international and intergovernmental organizations, trade associations, and unions are represented, and their expertise serves to inform the member nations. The GHS consequently represents a consensus recommendation of experts with regard to best practices for effective chemical hazard communication, reflecting the collective knowledge and experience of regulatory authorities in many nations and in different regulatory sectors, as well as other organizations that have expertise in this area.

United States-based scientific and professional associations have endorsed adoption of the GHS since publication of the Advance Notice of Proposed Rulemaking (ANPR) in 2006 (71 FR 53617, Sept. 12, 2006). For example, the American Chemical Society (ACS) indicated its support for the GHS, stating: ''The American Chemical Society strongly supports the adoption of the GHS for hazard communication in general and specifically as outlined in the ANPR'' adding that ''* * * ACS anticipates that OSHA implementation of GHS in the U.S. will enhance protection of human health and the environment through warnings and precautionary language that are consistent across different products and materials as well as across all workplaces'' (Document ID #0165). The American Industrial Hygiene Association (AIHA) affirmed its support for modification of the HCS to adopt the GHS. AIHA maintained that standardized labels and safety data sheets will make hazard information easier to use, thereby improving protection of employees (Document ID #0034). While acknowledging that the GHS presents a number of concerns and challenges, the Society of Toxicology has also expressed its support for the GHS, stating that ''a globally harmonized system for the classification of chemicals is an important step toward creating consistent communications about the hazards of chemicals used around the world'' (Document ID #0304). The American Association of Occupational Health Nurses joined these organizations in advocating adoption of the GHS, arguing that standardization of chemical hazard information is critical to protecting the safety and health of employees (Document ID # 0099). Responders to the 2009 NPRM reiterated their support or, in the case of new commenters, echoed the comments from other scientific and professional associations to the ANPR (*See, e.g.,* Document ID #0338, 0357, 0365, 0393, and 0410). The positions taken by these organizations point to wide support for the GHS among the scientific and professional communities.

Stakeholders representing a wide range of sectors and interests agreed with OSHA that aligning the HCS with the GHS will improve comprehensibility, and thus lead to reductions in chemical source illnesses and injuries. American Society of Safety Engineers, Dow Chemical, and ORC all voiced their support for the proposed rule, citing improved comprehensibility and quality of transmitted information as key benefits (Document ID #0336, 0353, and 0370). Representing union labor, the American Federation of State, County and Municipal Employees (AFSCME) stated that this rulemaking would ''allow critical communication about the hazards of chemicals to be understood by all workers, regardless of their literacy level or primary language * * * [and] will in turn lead to safer, more productive workplaces'' (Document ID #0414). Many stakeholders asserted that adopting the GHS would lead to safer workplaces. The Chamber of Commerce provided its support for the rulemaking, stating that the GHS could ''improve worker safety, and facilitate business growth and international trade'' (Document ID #0397). The American Subcontractors Association, Inc. added that consistent hazard communication is critical to having a safe work program (Document ID #0322). Additionally, North American Metals Council (NAMC), which represents the interests of the metals and mining industry, stated that a single, globally harmonized classification and labeling system is of vital interest to its members (Document ID #0233). The position that GHS would increase worker protection was also raised in testimony during the hearings. Elizabeth Treanor of Phylmar Regulatory Roundtable testified that adopting the GHS would ''enhance the effectiveness of the hazard communication standard by improving the quality and consistency of chemical hazard information that is provided to employees and employers'' (Document ID #0497 Tr. 92).

In addition to the endorsement of the GHS by a group of experts with extensive knowledge and experience in chemical hazard communication, support from scientific and professional associations with expertise in this area, and support from industry and labor stakeholders, a substantial body of evidence indicates that the modifications to the HCS will better protect employees. Specifically, this evidence supports OSHA's findings that: (1) Standardized label elements—signal words, pictograms, hazard statements and precautionary statements—will be more effective in communicating hazard information; (2) standardized headings and a consistent order of information will improve the utility of SDSs; and (3) training will support and enhance the effectiveness of the new label and SDS requirements.

This evidence was obtained from sources predating the ANPR and from more recent data. OSHA commissioned several studies to examine the quality of information on SDSs (Karstadt, 1988, Document ID #0296; Kearney/Centaur 1991a, 1991b, Document ID #0309 and 0310; Lexington Group, 1999, Document ID #0257); the General Accounting Office (GAO) has issued two reports based on its evaluation of certain aspects of the HCS (GAO 1991 and 1992, Document ID #0271 and 0272); a National Advisory Committee on Occupational Safety and Health (NACOSH) workgroup conducted a review of hazard communication and published a report of its findings (NACOSH, 1996, Document ID #0260); and a substantial amount of scientific literature relating to hazard communication has been published. As mentioned previously, OSHA

commissioned a review of the literature, and a report based on that review was published in 1997 (Sattler *et al.,* 1997, Document ID #0191). An updated review was conducted in 2007 (ERG, 2007, Document ID #0246). In addition, OSHA conducted a review of the requirements of the HCS and published its findings in March of 2004 (OSHA, 2004, Document ID #0224). Key findings derived from these sources are discussed below.

No commenters questioned the validity of studies presented in the NPRM. Similarly, commenters did not question OSHA's analysis or interpretation of the study findings. Only one commenter suggested that OSHA should adopt more ''conservative expectations for the effects that warning format changes can have on the behavior of end users,'' adding that ''real-world conditions'' must be accounted for when determining the actual responses of users (Document ID #0396). However, the commenter did not disagree with OSHA's overall conclusion that this final rule would improve safety. OSHA agrees that external factors may influence the overall benefits of label elements (this will be addressed in Section VI).

The studies discussed in the NPRM formed the evidentiary basis for the revised HCS. As such, OSHA infers that commenters generally found the studies, as well as OSHA's analysis, to be sound. OSHA's rationale for adopting the GHS is tied to anticipated improvements in the quality and consistency of the information that would be provided to employers and employees. Hazard classification is the foundation for development of this improved information. Indeed, hazard classification is the procedure of identifying and evaluating available scientific evidence in order to determine if a chemical is hazardous, and the degree of hazard, pursuant to the criteria for health and physical hazards set forth in the standard. Hazard classification provides the basis for the hazard information that is provided in labels, SDSs, and employee training. As such, it is critically important that classification be performed accurately and consistently.

The GHS provides detailed scientific criteria to direct the evaluation process. The specificity and detail provided help ensure that different evaluators would reach the same conclusions when evaluating the same chemical. Moreover, the GHS refines the classification process by establishing categories of hazard within most hazard classes. These categories indicate the relative degree of hazard, and thereby provide a basis for determining precise hazard information that is tailored to the level of hazard posed by the chemical. The classification criteria established in the GHS thus provide the necessary basis for development of the specific, detailed hazard information that would enhance the protection of employees.

Labels

Labels serve as immediate visual reminders of chemical hazards, and complement the information presented in training and on SDSs. The current HCS requires that labels on hazardous chemical containers include the identity of the hazardous chemical; appropriate hazard warnings that convey the specific physical and health hazards, including target organ effects; and the name and address of the chemical manufacturer, importer, or other responsible party. The HCS does not specify a standard format or design elements for labels.

In the NPRM, OSHA proposed to improve the HCS by changing the performance requirements for labels to the GHS-specific requirements that labels include four standardized elements: a signal word; hazard statement(s); pictogram(s); and precautionary statement(s) (*See* Section XV for a detailed discussion of the requirements). The appropriate label elements for a chemical are to be determined by the hazard classification. OSHA has concluded that these standardized label elements better convey critically important hazard warnings, and provide useful information regarding precautionary measures that will serve to better protect employees than the performance-oriented approach of the current rule.

This requirement is different from the current HCS in that it will require consistent and detailed information regarding a chemical based on the hazard classification. The current rule does not specify a standard format or design elements for labels. Rather, all that is required in the current HCS is that the label of the hazardous chemical containers include the identity of the hazardous chemical; appropriate hazard warnings that convey the specific physical and health hazards, including target organ effects; and the name and address of the chemical manufacturer, importer, or other responsible party.

Additionally, as discussed in the proposal (74 FR 50291, Sept. 30, 2009), a great deal of literature has been developed that examines the effectiveness of warnings on labels. These studies support OSHA's adoption of standardized warnings on the labels of hazardous chemicals. Although the studies discussed below pertain to prescription and non-prescription medications, alcoholic beverages, or consumer products rather than hazardous chemicals, it does not diminish the importance or relevance of the data. This literature provides a substantial body of information directly applicable and analogous to workplace chemical labels. In spite of the differences in affected populations, workplace chemical labels have many characteristics that are comparable to those found in other sectors. Pharmaceutical labels, for example, are similar to chemical labels in that they often have explicit instructions for use which, if not followed, can cause adverse health effects or death. Designers of pharmaceutical labels also encounter many of the same challenges faced by those who design chemical labels, such as container space limitations and the need to convey information to low-literate or non-English-literate users. In addition, some of the research is not directly related to any particular sector or type of product. Some findings related to use of color, for example, could reasonably be applied to a wide variety of label applications. The studies are discussed below in the specific labeling sections.

Signal Words

A signal word is a word that typically appears near the top of a warning, sometimes in all capital letters. Common examples include DANGER, WARNING, CAUTION, and NOTICE. The signal word is generally understood to serve a dual purpose: Alerting the user to a hazard and indicating a particular level of hazard. For example, users generally perceive the word DEADLY to indicate a far greater degree of hazard than a term like NOTICE.

This final rule requires the use of one of two signal words for labels—DANGER or WARNING—depending on the hazard classification of the substance in question. These are the same two signal words used in the GHS. DANGER is used for the more severe hazard categories, while WARNING denotes a less serious hazard. These signal words are similar to those in other established hazard communication systems, except that some other systems have three or more tiers. For example, ANSI Z129.1 (the American National Standard for Hazardous Industrial Chemicals—Precautionary Labeling) uses DANGER, WARNING, and CAUTION, in descending order of severity (ANSI, 2006, Document ID #0280).

A number of studies have examined how people perceive signal words and,

in particular, how they perceive signal words to be different from one another. Overall, this research supports the use of signal words on labels, demonstrating that they can attract attention and help people clearly distinguish between levels of hazard. The research also supports the decision to use only two tiers, as many recent studies have found clear differences between DANGER and WARNING, but little perceived difference between WARNING and CAUTION.

Wogalter *et al.* investigated the influence of signal words on perceptions of hazard for consumer products (Wogalter *et al.,* 1992, Document ID #0300). Under the pretext of a marketing research study, 90 high school and college students rated product labels on variables such as product familiarity, frequency of use, and perceived hazard. Results showed that the presence of a signal word increased perceived hazard compared to its absence. Between extreme terms (*e.g.,* NOTE and DANGER), significant differences were noted.

Seeking to test warning signs in realistic settings, Adams *et al.* tested five industrial warning signs on a group of 40 blue-collar workers employed in heavy industry, as well as a group of students (Adams *et al.,* 1998, Document ID #0235). Signs were manipulated to include four key elements (signal word, hazard statement, consequences statement, and instructions statement) or a subset of those elements. Participants were asked questions to gauge their reaction and behavioral intentions. Overall, 77 percent (66 percent of the worker group) recognized DANGER as the key word when it appeared, and more than 80 percent recognized BEWARE and CAUTION, suggesting that the signal word was generally noticed, and it was recognized as the key alerting element. DANGER was significantly more likely than other words to influence behavioral intentions.

Laughery *et al.* also demonstrated the usefulness of signal words. The authors tested the warnings on alcoholic beverage containers in the U.S., and found that a signal word (WARNING) was one of several factors that decreased the amount of time it took for participants to locate the warning (Laughery *et al.,* 1993, Document ID #0281).

Several studies have tested the arousal strength or perceived hazard of different signal words. *Arousal strength* is a term used to indicate the overall importance of the warning, and incorporates both the likelihood and severity of the potential threat. Silver and Wogalter tested the arousal strength of signal words on college students and found that DANGER connoted greater strength than WARNING and CAUTION (Silver and Wogalter, 1993, Document ID #0308). The results failed to show a difference between WARNING and CAUTION. Among other words tested, DEADLY was seen as having the strongest arousal connotation, and NOTE the least.

Griffith and Leonard asked 80 female undergraduates (who were unlikely to have already received industrial safety training) to rate signal words. Results included a list of terms in order of ''meaningfulness,'' representing conceptual ''distance'' from the neutral term NOTICE (Griffith and Leonard, 1997, Document ID #0250). From most to least meaningful, these terms were reported to be DANGER, URGENT, BEWARE, WARNING, STOP, CAUTION, and IMPORTANT.

Wogalter *et al.* asked over 100 undergraduates and community volunteers to rank signal words (Wogalter *et al.,* 1998, Document ID #0286). DEADLY was perceived as most hazardous, followed by DANGER, WARNING, and CAUTION. All differences were statistically significant. In a follow-up experiment using labels produced in the ANSI Z535.2 (American National Standard for Environmental and Facility Safety Signs), ANSI Z535.4 (American National Standard for Product Safety Signs and Labels), and alternative formats, the authors found a similar rank order for signal words with all labeling systems. Finally, the authors tested the same terms on employees from manufacturing and assembly plants and found the same general order: DEADLY, then DANGER, then WARNING and CAUTION with no significant difference between the last two terms.

In more of a free-form experiment, Young asked 30 subjects to produce warning signs for a set of scenarios, using different sign components available on a computer screen (Young, 1998, Document ID #0289). In roughly 80 percent of the signs, the participant chose to use a signal word. DANGER, DEADLY, and LETHAL were more likely to be used for scenarios with severe hazards; CAUTION and NOTICE for non-severe scenarios. WARNING was used equally in both types of scenarios. The author suggests that these results support a two-tiered system of signal words. In a separate task, users ranked the perceived hazard of signal words, resulting in the following list from most to least severe: DEADLY, LETHAL, DANGER, WARNING, CAUTION, and NOTICE.

While these studies have focused on the relative perceptions of signal words, others have sought to evaluate how the absolute meaning of common signal words is perceived. Drake *et al.* asked a group of students and community volunteers to match signal words with definitions borrowed from consensus standards and other sources (Drake *et al.,* 1998, Document ID #0244). Participants matched DANGER to a correct definition 64 percent of the time, while NOTICE was matched correctly 68 percent of the time. WARNING and CAUTION were matched correctly less than half of the time, suggesting confusion. The authors recommended using WARNING and CAUTION interchangeably. The authors also suggested that a standard set of signal words (but not synonyms) is helpful for users with limited English skills, who can be trained to recognize a few key words.

Signal word perceptions are reported to be consistent among some non-U.S. populations, as well. Hellier *et al.* asked 984 adults in the UK to rate DANGER, WARNING, and CAUTION on a hazard scale from 1 (low) to 10 (high) (Hellier *et al.,* 2000a, Document ID #0252). DANGER was ranked as 8.5, WARNING was ranked as 7.8, while CAUTION was rated as 7.25. These results are consistent with the findings of studies on subjects in the U.S. In a second study published in 2000, Hellier *et al.* asked a mixed-age group of participants in the UK to rate the arousal strength of 84 signal words commonly used in the U.S. (Hellier *et al.,* 2000b, Document ID #0253). The authors found that DANGER is stronger than WARNING, while WARNING and CAUTION are not significantly different from each other.

Similar results were found among workers in Zambia. Banda and Sichilongo tested GHS-style labels using four different signal words (as well as other variables) (Banda and Sichilongo, 2006, Document ID #0237). Among workers in the industrial and transport sectors, DANGER was generally perceived as the most hazardous signal word. WARNING was one of a group of terms that were largely indistinguishable from one another, but distinct from DANGER. The authors support adoption of the GHS, suggesting that having just two possible signal words will lead to ''more impact and less confusion about the extent of hazard.''

In addition, comparable results were found in South Africa (London, 2003, Document ID #0311). In a large study on SDS and label comprehensibility conducted for South Africa's National Economic Development and Labour

Council (NEDLAC), DANGER was generally ranked as more hazardous than WARNING by participants in the four sectors tested: industry, transport, agriculture, and consumers.

Cumulatively, these studies provide a clear indication that signal words are effective in alerting readers that a hazard exists, and in conveying the existence of a particular level of hazard. The studies found a generally consistent hierarchy of signal words with respect to perceived hazard. DANGER and WARNING appear to connote different levels of hazard, while the perceived difference between WARNING and CAUTION is often insignificant.

In response to the NPRM, OSHA received a comment from Croplife America about the impact of using a two-tiered signal word system on pesticide labels (Document ID #0387). Croplife America explained that they believe a three-tiered system (DANGER, WARNING and CAUTION) provides ''a little more distinction in the relative toxicity of a compound'' and ''if everything says 'warning,' we run the risk of diluting the effectiveness of the signal word'' (Document ID #0495 Tr. 251). During the informal public hearings, OSHA requested that Croplife America support their position on why a three-tiered warning system is better than a two-tiered system. To support this assertion, Croplife America submitted a late comment containing an additional paper by Hellier *et al.* which analyzed how signal words are interpreted (Hellier *et al.,* 2007, Document ID #0646).

This paper discusses two studies performed in 2007 to analyze if alternative information is communicated with signal words (Hellier *et al.,* 2007, Document ID #0646). Using 17 signal words, 30 undergraduate students were asked to rate the similarities of paired signal words. In the first study, the result ratings revealed that signal words were interpreted by the participants along three dimensions; dimension one: the level of hazard implied by the signal words, dimension two: the extent to which they explicitly implied a risk, and dimension three': the clarity of the instruction given by the signal word. Using the same signal words as in the first study, the second study explored how these signal words were interpreted by the study participants. Using statistical analysis, the analysis confirmed that the participants were able to discern the levels of hazard implied by the signal words and how it to relates to the explicitness of the implied risk (dimensions one and two). The results of the third dimension were unclear. The studies indicate that the extent to which signal words imply risk is important—people may not respond when repeatedly exposed to warnings that do not explicitly imply a risk. The results support using signal words to denote the level of hazard implied by the situation, and that there might be utility in using signal words to convey both information about a potential risk and the level of hazard.

Even if it had been timely submitted, OSHA is not convinced that this study supplies sufficient evidence that using a two-tiered signal word approach will diminish the chemical user's ability to distinguish hazard severity. In OSHA's opinion, if anything, the Hellier study provides additional support for the use of signal words on labels to attract attention and to identify levels of hazard. Indeed, its results show that the signal word ''caution'' was substantially less connected by participants with communicating hazards than ''warning'' and ''danger,'' which supports OSHA's decision not to use ''caution'' as a signal word. The record supports OSHA's determination that using the signal word in combination with the hazard statement alerts the chemical user to the hazard and allows him or her to distinguish the level of hazard severity posed by hazardous chemicals in the workplace.

Commenting on the studies presented in the proposal, Applied Safety and Ergonomics (ASE) agreed that there are benefits associated with the standardization of warning elements. However, they also urged ''OSHA to adopt more conservative expectations for the effect that warning format changes can have on the behavior of end users'' (Document ID #0396). *See* Section VI of this final rule for a detailed discussion of the benefits of standardized warning elements. OSHA does not disagree with these comments and has determined that requiring the use of the combined labeling elements (pictograms, signal words, hazard statements, and precautionary statements) will result in a uniform and consistent system of identifying and communicating chemical hazards in the workplace. No other comments were received on the studies OSHA used in its discussion of the need for signal words in this revised HCS.

Comments received from stakeholders support the revision of the HCS to include the use of standardized signal words (Document ID #0321, 0338, 0339, and 0349). For example, the Communications Workers of America (CWA) stated: ''Clearly, the Rule's requirements regarding revised SDSs and labeling provisions requiring the use of standardized signal words, pictograms, and hazard and precautionary statements would prove invaluable to affected CWA members whom have been exposed to hazardous chemicals and chemical products that have produced negative health effects and medical problems'' (Document ID #0349). These comments support OSHA's conclusion that signal words alert chemical users to a hazard and indicate a particular level of hazard.

After reviewing the comments received and the evidence presented in the record, OSHA has determined that, in this revised rule, use of the signal words ''DANGER'' and ''WARNING'' is appropriate.

Pictograms

A pictogram is a graphical composition that may include a symbol along with other graphical elements, such as a border or background color. A pictogram is a communication tool and is intended to convey specific information. The proposed rule included requirements for use of eight different pictograms. Each of these pictograms consists of a different symbol in black on a white background within a red square frame set on a point (*i.e.,* a red diamond). The specific pictograms on a label were to be determined based on the hazard classification of the substance in question. OSHA has found ample evidence to support the requirement for pictograms.

A study by Kalsher *et al.* reported that users preferred labels with pictorials. The authors concluded that pictorials focused the attention of the user, helped users who were unable to read the small font size or print on the labels, and were useful for individuals who did not understand English (Kalsher *et al.,* 1996, Document ID #0256). The presence of the symbol can attract attention to the warnings and are more memorable than written warnings (Parsons *et al.,* 1999, Document ID #0262). Symbols serve several important functions in warning labels. As Wogalter *et al.* explained (Wogalter *et al.,* 2006, Document ID #0275), symbols may alert the user to a hazard more effectively than text alone:

> Symbols may be more salient than text because of visual differentiations of shape, size, and color. Usually symbols have unique details and possess more differences in appearance than do the letters of the alphabet. Letters are highly familiar and are more similar to one another than most graphical symbols.

Other investigators have examined the benefits of pictograms for those with low literacy levels and those who do not understand the language in which the

label text is written. A study by Parsons *et al.* concluded that nonverbal graphics are especially helpful for ensuring that individuals, who do not speak English or who have limited understanding of English, understand the meaning of the intended warning (Parsons *et al.,* 1999, Document ID #0262). Another study has shown that people with low literacy skills can, with the help of pictographs, recall large amounts of medical information over significant periods of time (Houts *et al.,* 2001, Documents ID #0254).

Several researchers have sought to evaluate how people comprehend symbols, including the symbols that were proposed to be required. Several studies have found that the skull and crossbones icon—one of the symbols proposed and included in the final rule—is among the most recognizable of safety symbols. For example, Wogalter *et al.* asked 112 undergraduates and community volunteers to rank various label elements (Wogalter *et al.,* 1998, Document ID #0244). Among shapes and icons, the skull symbol (in this case, without the crossbones) was rated most hazardous and most noticeable. The skull connoted the greatest hazard among industrial employees as well. Smith-Jackson and Wogalter asked 48 English-speaking workers to rate the perceived hazards of six alerting symbols (Smith-Jackson and Wogalter, 2000, Document ID #0196). The skull was rated significantly higher than all other symbols.

Several studies have examined other pictograms included in the final rule. As part of an experiment to see how individuals comprehend warnings on household chemical labels, Akerboom and Trommelen asked 60 university students whether they understood the meaning of several pictograms, including four that are included in the final rule (Akerboom and Trommelen, 1998, Document ID #0236). The authors reported the following levels of comprehension for these pictograms:

- Flame: 93 percent comprehension;
- Skull and crossbones: 85 percent comprehension;
- Corrosion: 20 percent comprehension; and
- Flame over circle: 13 percent comprehension.

Only the flame and skull and crossbones pictograms met the 85 percent comprehension criteria suggested by ANSI Z535.3 (the American National Standard Criteria for Safety Symbols) (ANSI, 2002a, Document ID #0276). The authors recommend that labels present the hazard phrase [statement] and symbol together, along with corresponding precautions, as has been included as a requirement in the final rule.

Banda and Sichilongo tested comprehension of labels among 364 workers in four sectors in Zambia (transport, agriculture, industrial, and household consumers) (Banda and Sichilongo, 2006, Document ID #0237). Within this population, the skull and crossbones symbol was widely understood, as was the ''flame'' symbol. Based on these results, the authors suggest a preference for symbols that depict familiar, meaningful, and recognizable images.

London performed a similar study among the same four sectors in South Africa, finding that the skull and crossbones was understood by at least 96 percent of each sector and ''flame'' by at least 89 percent (London, 2003, Document ID #0311). ''Exploding bomb'' was correctly comprehended by 44 to 71 percent of each sector. On the other hand, many health-related symbols did not fare well, and six symbols had less than 50 percent comprehension across all four sectors. Outside the transport sector, ''Gas cylinder'' was the least comprehended symbol.

These findings indicate that some of the pictograms included in the final rule are already widely recognized by a general audience. Others, however, are not commonly understood. Therefore, simply adding some of the pictograms on labels will not provide useful information unless efforts are also undertaken to ensure that employees understand the meaning of the pictograms. As Wogalter *et al.* noted, some studies have found slower processing, poorer recognition, and greater learning difficulties with symbols versus with text—particularly if the symbols are complex or non-intuitive (Wogalter *et al.,* 2006, Document ID #0275). These results emphasize the need to train employees on the meaning of the pictograms that will be included on chemical labels.

Where pictograms are used and understood, communication of hazards can be improved. Houts *et al.* studied long-term recall of spoken medical instructions when accompanied by a handout with pictograms (Houts *et al.,* 2001, Document ID #0254). Nearly 200 pictograms were tested with 21 low-literate adults (less than grade 5 reading level). Immediately after training, participants recalled the meaning of 85 percent of the pictograms, and they recalled 71 percent after 4 weeks. This study found that recall was better for simple pictograms where there is a direct relationship between the image and its meaning—that is, where no inference is required.

Another body of literature focuses on the utility of symbols in general. Ganier found that people generally construct mental representations faster with pictures than they do with text, supporting earlier findings on the usefulness of symbols (Ganier, 2001, Document ID #0275). Evans *et al.* found similar results with a task in which undergraduates were asked to sort items into categories using either text clues, visual clues, or a combination of pictures and text (Evans *et al.,* 2002; Document ID #0192). When categories were fixed (*i.e.,* sorting instructions were specific), people sorted the cards more consistently with one another when presented with pictures than when presented with text alone.

In a follow-up article on the South African study mentioned previously, Dowse and Ehlers found that patients receiving antibiotics adhered to instructions much better when the instructions included pictograms—(54 percent with high adherence, versus 2 percent when given text-only instructions) (Dowse and Ehlers, 2005, Document ID #0243).

Pictograms also serve to attract attention to the hazard warnings on a label. To examine factors that influence the effectiveness of pharmaceutical labels, Kalsher *et al.* asked subjects to rate the noticeability, ease of reading, and overall appeal of labels with or without pictorials (Kalsher *et al.,* 1996, Document ID #0256). A group of 84 undergraduates gave consistently higher ratings to labels with pictorials. A group of elderly subjects had similar preferences, rating labels with pictorials as significantly more noticeable and likely to be read.

Laughery *et al.* found similar results with a timed test on alcoholic beverage labels (Laughery *et al.,* 1993, Document ID #0281). When a pictorial was present to the left of the warning showing what not to do when drinking, the amount of time it took to find the label was significantly reduced. An icon consisting of the alert symbol (an exclamation mark set within a triangle) and the signal word WARNING also decreased response time. The fastest response time came when four different enhancements (including the pictorial and the icon) were included. In a follow-up exercise, an eye scan test found that the pictorial had a particularly strong influence on reaction time, compared with other enhancements.

Where chemical labels are concerned, London found that symbols tend to be the most easily recalled label elements (London, 2003, Document ID #0311). In the comprehensibility test of labels

among South African workers mentioned previously, symbols were the most commonly recalled elements—particularly the skull and crossbones—and people recalled looking at symbols first. Symbols were also cited as by far the most important factor in determining hazard perception. The author concludes that ''Symbols are therefore key to attracting attention and informing risk perception regarding a chemical'' (London, 2003, Document ID #0311).

Wogalter *et al.* found factors other than pictorials influenced workers (Wogalter *et al.,* 1993, Document ID #0285). The authors tested the influence of various warning variables on whether subjects wore proper protective equipment during a task involving measuring and mixing chemicals. Warning location and the amount of clutter around the warning had significant effects on compliance, but the presence or absence of pictorials did not.

Meingast asked subjects to recall warning content after viewing labels that were considered either high quality (with color signal icons, pictorials, and organized text conforming to ANSI Z535.4, the American National Standard for Product Safety Signs and Labels) or low quality (text only) (Meingast, 2001, Document ID #0210). Pictorials were the items remembered most often, accounting for 48 percent of what viewers of high-quality labels recalled. The author suggests that these pictorials also served the role of dual coding, meaning that they help to improve the retention of corresponding text.

Other studies support this dual-coding function of pictorials, finding that symbols tend to be most effective when paired with redundant or reinforcing text. For example, Sojourner and Wogalter asked 35 participants to rate several prescription label formats in terms of ease of reading, ease of understanding, overall effectiveness, likelihood of reading, overall preference, pictorial understanding, and how helpful pictorials are in helping to remember the instructions (Sojourner and Wogalter, 1997, Document ID #0288). The authors found that people prefer fully redundant text and pictorials, which they judged easiest to read, most effective, and preferred overall. Dual-coded pictorials aided understanding and memory more than labels with pictorials only (no text).

In a follow-up study, Sojourner and Wogalter gave undergraduates, young adults, and older adults a free recall test after viewing medication labels (Sojourner and Wogalter, 1998, Document ID #0288). Fully redundant text and pictorials led to significantly greater recall than other formats, and were rated most effective by all age groups.

Similarly, Sansgiry *et al.* found that pictograms on over-the-counter drug labels improved comprehension, but only when they were congruent with the corresponding text (Sansgiry *et al.,* 1997, Document ID #0264). The 96 adults who were tested were less confused, were more satisfied, were more certain about their knowledge, and understood more when shown labels that contained congruent pictures and verbal instructions, versus verbal instructions alone. The results were significantly better with congruent pictures and text than with either pictures alone or incongruent pictures and text.

Some evidence links use of pictograms directly to safer behavior. Jaynes and Boles investigated whether different warning designs, specifically those with symbols, affect compliance rates (Jaynes and Boles, 1990, Document ID #0290). Five conditions were tested: a verbal warning, a pictograph warning with a circle enclosing each graphic, a pictograph warning with a triangle on its vertex enclosing each graphic, a warning with both words and pictographs, and a control (no warning). Participants performed a chemistry laboratory task using a set of instructions that contained one of the five conditions. The warnings instructed them to wear safety goggles, mask, and gloves. All four warning conditions had significantly greater compliance than the no-warning condition. A significant effect was also found for the ''presence of pictographs'' variable, suggesting that the addition of pictographs will increase compliance rates.

NIOSH submitted an additional study at the informal public hearings that analyzed the use of pictograms on labels. In 1997, Wilkinson *et al.* (Document ID #0480.6), interviewed 206 farmers in Victoria Australia. Two widely used agricultural herbicides were used for the basis of the research. The researchers developed three ''mocked-up'' labels for each herbicide—one containing existing warning text, one containing existing text with pictograms of appropriate safety precautions, and one containing text with pictograms that had been tested for recognition and comprehension across a variety of cultures and literacy levels. The interviewees answered questions using a rating scale, which was subjected to a statistical analysis to determine the significance of the responses. The authors concluded that ''the labels with added pictograms were perceived by pesticide users as significantly easier to obtain information from than labels containing text only'' (Document ID #0480.6).

Stakeholders on the whole supported the inclusion of pictograms on the labels of hazardous substances. During the hearings, Chris Trahan of the AFL–CIO voiced support for including pictograms on the labels of hazardous chemicals, and cited construction workers as a group whose safety and health conditions would be greatly improved by OSHA's adoption of ''a system of symbols [workers] can then readily use to make decisions on a daily basis'' (Document ID #0494 Tr. 8).

As discussed in the proposal, a considerable amount of evidence shows that pictograms can serve as useful and effective communication tools. In the final rule, OSHA has decided to adopt the eight GHS pictograms initially proposed in the NPRM. Each of these pictograms consists of a different symbol in black on a white background within a red square frame set on a point (*i.e.,* a red diamond). The specific pictograms that are required on a particular label are to be determined based on the hazard classification of the substance in question.

OSHA finds, based on scores of supporting studies and persuasive testimony that the pictograms will make warnings on labels more noticeable and easier for employees to understand. In particular, symbols will improve comprehension among people with low literacy levels and those who are not literate in the English language. Moreover, pictograms will be used not only in conjunction with other label elements, but also in the context of the hazard communication program as a whole. Training that includes an explanation of labels (included in the final rule) will ensure that the pictograms are understood by employees.

Red Borders

GHS allows regulatory authorities the option of permitting black pictogram borders for labels on domestic products, and in the proposal OSHA requested comment on this issue. Mandating the use of red borders was supported by stakeholders, who argued persuasively that red borders would make labels more noticeable and would make the warnings appear to be more important (Document ID #0339, 0341, 0365, 0383, 0408, 0410, 0412, and 0456). The National Association of Chemical Distributers, in supporting the use of red borders, reasoned that they would be consistent with the overall goal of the

GHS (Document ID #0341). Additionally, the AIHA stated that requiring red borders would promote the safe use of chemicals (Document ID #0365).

Several commenters raised economic concerns, suggesting that because red ink is more expensive, the use of black borders should be permitted (Document ID #0318, 0328, 0370, 0377, 0382, 0393, and 0411). Dow Chemical, Troy Corporation, and several other commenters recommended that red borders should only be required on products that were being exported (Document ID #0352, 0353, 0399, 0405, and 0389). Similarly, API argued that in order to remain consistent with the GHS, OSHA should only require exported chemicals to have a red border (Document ID #0376).

OSHA finds this argument to be unpersuasive. In order to reap the benefits of consistency in warnings, labels must have a degree of sameness and that includes the colors used. Moreover, OSHA analyzed the impact that the use of red borders would have on production costs. While the use of red borders may increase the cost of printing, OSHA has determined that the cost does not render the rule infeasible. This issue is discussed in greater detail in Section VI. Finally, the GHS does not even state a preference for black borders on labels of domestic products; it simply gives the competent authority discretion to allow black borders when the product will not enter into international commence.

Numerous studies have found that substantial benefits exist when color is used on labels. Due to the extensive amount of information that needs to be displayed, warning labels can become cluttered. Swindell found that searching for needed information on a cluttered label is very challenging for the user (Swindell, 1999, Document ID #0284). Her study concluded that minor changes to an extensive warning label, such as the addition of color, can greatly improve the noticeability of the warning, grab the attention of the user faster, and produce quicker reaction times.

Swindell also researched the effect that different colors (red, blue, and black) had on the time it took users to locate and respond to a warning. Red was perceived to indicate the highest degree of hazard and was shown to increase the perceived hazard of a word presented in that color (*e.g.,* DANGER in blue is perceived as less hazardous than WARNING in red).

Swindell's findings echo the results reported by Laughery *et al.,* who found that alcoholic beverage labels were located significantly faster when the text was red instead of black (Laughery *et al.,* 1993, Document ID #0281). These studies involve color on label elements other than the pictogram borders, but the presence of color and the particular color is germane to the red borders of labels.

The primacy of red as an understandable color denoting danger is also supported by these studies.

- Smith-Jackson and Wogalter asked English-speaking community members to rate the perceived hazard of ten ANSI safety colors (Smith-Jackson and Wogalter, 2000, Document ID #0196). Red, yellow, black, and orange were rated the highest (in descending order). Differences were statistically significant except the difference between yellow and black.
- Among 80 college students asked to rate colors by Griffith and Leonard, red was rated the most ''meaningful'' color (*i.e.,* most distinct in meaning from neutral gray), followed by green, orange, black, white, blue, and yellow (Griffith and Leonard, 1997, Document ID #0250).
- Wogalter *et al.* asked Spanish speakers to rank the perceived hazard of ANSI safety colors (Wogalter *et al.,* 1997b, Document ID #0266). Red was ranked highest, followed by orange, black, and yellow.
- Dunlap *et al.* surveyed 1169 subjects across several different language groups including English, German, and Spanish speakers (Dunlap et *al.,* 1986, Document ID #0191). Subjects rated the color words red, orange, yellow, blue, green, and white according to the level of perceived hazard. The results demonstrated that the hazard information communicated by different colors followed a consistent pattern across language groups, with red having the highest hazard ratings.
- Wogalter *et al.* asked undergraduates and community volunteers to rank various warning components (Wogalter *et al.,* 1998, Document ID #0286). Red connoted a significantly greater hazard than other colors, followed by yellow, orange, and black (in that order). A group of industrial workers ranked the colors from greatest to least hazard as follows: red, yellow, black, orange.
- London asked workers in four sectors in South Africa to rank the colors red, yellow, green, and blue in terns of perceived hazard; 95 percent said red represents the greatest hazard, and 58 percent said yellow is the second greatest hazard (London, 2003; Document ID #0311).
- Banda and Sichilongo asked workers in Zambia to rate the perceived hazard of various colors used in chemical labels (Banda and Sichilongo, 2006, Document ID #0237). Red was associated with the greatest hazard, followed by yellow.
- Among a sample of 30 undergraduates who rated the perceived hazard of 105 signal word/color combinations, Braun *et al.* reported that red conveyed the highest level of perceived hazard followed by orange, black, green, and blue (Braun *et al.,* 1994, Document ID #0298).

These reports are consistent in showing that red is commonly understood to be associated with a high level of hazard—the highest of any color.

After reviewing stakeholder comments and studies investigating the benefits of using the color red to signal a hazard, OSHA has decided to require all pictograms to have red borders. OSHA finds that these labels will be more effective in communicating hazards to employees—both by drawing the attention of employees to the label and by indicating the presence of a hazard through non-verbal means. Consistently applying red borders to all labels, regardless of the final destination, will ensure that workers are protected. OSHA has determined that red pictogram borders will maximize recognition of the warning label and ensure consistency; therefore the final rule requires red borders for both domestic and international labeling.

Blank Diamonds

The final rule requires that all red diamonds printed on a label have one of the eight pictograms printed inside the diamond. The prohibition of blank diamonds on labels will ensure that users do not get desensitized to warnings placed on labels. Two commenters proposed alternatives to the prohibition of blank diamonds. The American Chemical Council (ACC) suggested that, because the red diamond border for pictograms are often pre-printed on shipping labels, OSHA allow printing the word ''BLANK'' on, or writing ''pictogram intentionally left blank'' in, the unused diamond (Document ID #0393). Additionally, Michelle Sullivan also suggested writing ''intentionally left blank'' in the empty diamonds (Document ID #0382).

OSHA acknowledges that prohibiting blank diamonds on labels may require an adjustment in practice for entities that use pre-printed labels or require businesses to inventory additional blank stock. OSHA analyzed the impact that prohibiting the use of blank diamonds on labels would have on production costs. While this requirement may

increase costs associated with labeling, OSHA has determined that the costs do not render the rule infeasible. This issue is discussed in greater detail in Section VI.

Including diamonds on labels only when a pictogram is required will ensure that such warnings stand out to users. Prohibiting the use of blank diamonds will improve the likelihood that users will notice and react to the warning on the label. Therefore, OSHA has determined that prohibiting the use of blank diamonds on labels is necessary to provide the maximum recognition and impact of warning labels and to ensure that users do not get desensitized to the warnings placed on labels.

Hazard Statements and Precautionary Statements

Hazard statements describe the hazards associated with a chemical. Precautionary statements describe recommended measures that should be taken to protect against hazardous exposures, or improper storage or handling of a chemical. This revised rule replaces the current performance-oriented requirement for ''appropriate hazard warnings'' on labels with a requirement for specific hazard and precautionary statements on labels. The statements are prescribed, based on the hazard classification of the chemical.

Standardized requirements for hazard and precautionary statements provide a degree of consistency that is lacking among current chemical labels. This lack of consistency among current labels makes it difficult for users to understand the nature and degree of hazard associated with a chemical, and to compare chemical hazards. For example, in an article reviewed for the record, Dr. Beach relates experiences from the perspective of a doctor treating occupationally exposed patients (Beach, 2002, Document ID #0238). The author noted that different suppliers use different risk phrases for the same chemical, making it difficult for users to compare relative risks.

ANSI standard Z129.1, Hazardous Industrial Chemicals—Precautionary Labeling (Document ID #0610), was developed to provide a consistent approach to labeling of hazardous chemicals. This standard gives manufacturers and importers guidance on how to provide information on a label, including standardized phrases and other information that can improve the quality of labels. Because it is a voluntary standard, however, not all chemical manufacturers and importers have adopted the ANSI approach. As a result of the diverse formats and language used in the past, a consistent and understandable presentation of information was not fully achieved.

A preference for hazard statements was shown in EPA's Consumer Labeling Initiative (Abt Associates, 1999, Document ID #0209). This study asked consumers about their attitudes toward labels on household chemical products. Overall, consumers indicated that they like to have information that clearly connects consequences with actions, and they prefer to know why they are being instructed to take a particular precaution. A clear hazard statement provides this information.

In some cases, clear and concise precautionary information is necessary to enable employees to identify appropriate protective measures. For example, Frantz *et al.* examined the impact of flame and poison warning symbols prescribed in certain regulations by the Canadian government (Frantz *et al.,* 1994, Document ID #0191). The results suggest that although the generic meanings of these two symbols are well understood, people may have difficulty inferring the specific safety precautions necessary for a particular product.

Other reports indicate that users prefer information that includes both an indication of the hazard and the recommended action (*i.e.,* the precautionary statement). Braun *et al.* examined statements in product instructions for a pool treatment chemical and a polyvinyl chloride (PVC) adhesive, asking subjects to rate the injury risk posed by each product (Braun *et al.,* 1995, Document ID #0246). The experimenters manipulated the instructions to include either recommended actions only, actions followed by consequences, consequences followed by actions, or a simple restatement of the product label. The authors found that actions paired with consequences led to significantly higher risk perception than a restatement of the label or actions alone. Although the preferred wording was longer than the alternatives, subjects did not feel that the instructions were too complex, suggesting that they appreciate having actions and consequences paired together. Freeman echoed these findings in a discussion on communicating health risks to fishermen and farmers, noting that to be useful, risk statements should be balanced with equally strong statements of ways to reduce or avoid the risk (Freeman, 2001, Document ID #0249).

Explicit precautionary statements make it more likely that employees will take appropriate precautions. Bowles *et al.* asked subjects to review product warnings, then either decide what actions they should take or evaluate whether someone else's actions were safe, based on the warning (Bowles *et al.,* 2002, Document ID #0246). In general, situations that required the user to make inferences about a hazard—particularly when they had to come up with their own ideas for protective actions—led to decreased intent to comply. By providing clear precautionary instructions on the label, the revised rule eliminates the need for users to infer protective actions.

Evidence indicates that using key label elements together improves warning performance, compared with labels that only contain a subset of these elements. This is the approach taken in the revised rule, which requires the signal word, pictogram(s), hazard statement(s), and precautionary statement(s) together on the label. In one study, Meingast asked students to recall information from two variations of warning labels: Enhanced warnings with color, signal icons, pictorials, and organized text (following the ANSI Z535.4 standard, American National Standard for Product Safety Signs and Labels); and warnings with text only (Meingast, 2001, Document ID #0246). The authors reported that the enhanced warnings were more noticeable, led to significantly greater recall, and made people report a higher likelihood of compliance.

Other findings agree that improving all label elements can improve warning performance. For example, Lehto tested information retrieval from three chemical label formats and found that subjects generally did best with an ''extensive'' format that included pictograms, paragraphs, and horizontal bars indicating the degree of hazard (Lehto, 1998, Document ID #0258). Subjects were able to answer more questions correctly when the label included a range of content—particularly information on first aid and spill procedures.

Wogalter *et al.* reported similar results in a test of four different signs that discouraged people from using an elevator for short trips (Wogalter *et al.,* 1997a, Document ID #0287). Three signs were text-only. The fourth sign had a signal word panel, icons, a pictorial, and more explicit wording indicating the desired behavior (*i.e.,* ''use the stairs''). Subjects rated the enhanced sign as more understandable, and a field test found that it significantly increased compliance over the other options.

The effectiveness of a combination of elements was also investigated in a study of warnings on alcoholic beverage containers (Laughery *et al.,* 1993,

Document ID #0281). Laughery et al. tested warnings to determine which elements influenced notice ability. The authors manipulated labels by adding a pictorial, adding an alert symbol with a signal word, making the text red, and/or adding a border around the warning. The warning was located fastest when all four of these modifications were present, suggesting that the best designs include a combination of enhancements.

The findings of these reports support OSHA's belief that the combined label elements, *i.e.,* pictogram, signal word, hazard and precautionary statements, is more effective in communicating hazard information than the individual elements would be if presented alone. Although the warnings examined in these studies are different than those warnings required in this final rule, they indicate that enhancements such as color and symbols can increase the effectiveness of a label, and that presenting hazard information and corresponding precautions together improves understanding.

Overall, the record shows that the presentation of information on labels through standardized signal words, hazard statements, pictograms, and precautionary statements would provide clearer, more consistent, and more complete information to chemical users. Comments received in response to the ANPR support this view (*e.g.,* Document ID #0032, 0054, 0124, and 0158). For example, the Refractory Ceramic Fibers Coalition (Document ID #0030) pointed to the benefits of this approach, stating:

> Employers and employees would be given the same information on a chemical regardless of the supplier. This consistency should improve communication of the hazards. It may also improve communication for those who are not functionally literate, or who are not literate in the language written on the label. In addition, having the core information developed already, translated into multiple languages, and readily available to whomever wishes to access it, should eliminate the burden on manufacturers and users to develop and maintain their own such systems. Thus the specification approach should be beneficial both to the producers and the users of chemicals.

The majority of comments received in response to the proposal support the use of hazard and precautionary statements on labels (*See, e.g.,* Document ID #0313, 0324, 0327, 0328, 0329, 0330, 0335, 0336, 0338, 0339, 0344, 0347, 0349, 0351, 0352, 0353, 0365, 0370, 0372, 0376, 0377, 0379, 0381, 0382, 0383, 0389, 0393, 0399, 0402, 0405, 0408, 0410, 0412, 0453, 0456, and 0461). No comments or testimony were received that opposed the use of hazard or precautionary statements on labels or safety data sheets.

In response to the proposal, stakeholders commented on the importance of being able to comprehend hazard and precautionary statements (*See, e.g.,* Document ID #0321, 0339, 0349, 0410, and 0412). Morganite Industries, Inc. and Morgan Technical Ceramics USA stated: ''Hazard Statements, by and large, convey fact in simple language'' (Document ID #0321). Commenting on the use of precautionary statements, the Phylmar Group noted that ''clear, concise use of key labeling elements can improve warning performance'' (Document ID #0339). The American Industrial Hygiene Association also supports the use of precautionary statements, stating that they ''should improve comprehensibility and compliance'' (Document ID #0410).

Labels are intended to provide an immediate visual reminder of chemical hazards. Whereas labels in the past could be presented in a variety of formats using inconsistent terminology and visual elements, labels prepared in accordance with the requirements in this final rule will be consistent. Standardized signal words and hazard statements attract attention and communicate the degree of hazard. Pictograms reinforce the message presented in text and enhance communication for low-literacy populations. Precautionary statements provide useful instructions for protecting against chemical-source injuries and illnesses.

A number of stakeholders submitted comments in support of standardized labeling for hazardous chemical containers. Several commenters stated that standardized label elements would better convey critically important hazard warnings, and provide useful information regarding precautionary measures that would serve to better protect employees (Document ID #0313, 0341, 0344, 0365, 0381, 0382, 0402, and 0405). The studies contained in the record reinforce OSHA's position on the use standardized label elements—including the use of standardized pictograms, signal words, and hazard and precautionary statements—to alert and inform chemical users of the hazards posed by hazardous chemicals in the workplace.

OSHA concludes, based on the studies discussed above and supported by the comments submitted to the record that standardizing the labels for hazardous chemicals is an essential step in harmonizing the HCS with the GHS. In addition, OSHA concludes that the labeling requirements in this revised final rule will result in more effective transmittal of information to employees. Therefore, OSHA has adopted the labeling requirements set forth in the NPRM in this final rule.

Safety Data Sheets

The HCS requires chemical manufacturers and importers to develop an SDS for each hazardous chemical they produce or import. SDSs serve as a source of detailed information on chemical hazards and protective measures. Each SDS must indicate the identity of the chemical used on the label; the chemical and common name(s) of hazardous ingredients; physical and chemical characteristics; physical and health hazards; the primary route(s) of entry; exposure limits; generally applicable precautions for safe handling and use; generally applicable control measures; emergency and first aid procedures; the date of preparation of the SDS; and the name, address and telephone number of the party preparing or distributing the SDS. Prior to this final standard, the information was not required to be presented in any particular order or to follow a specific format.

While the effectiveness of SDSs is evident, there are concerns regarding the quality of information provided. In particular, concerns have been raised regarding the accuracy (*i.e.,* the correctness and completeness of the information provided) and comprehensibility (*i.e.,* the ability of users to understand the information presented) of information provided on SDSs. In the NPRM, OSHA proposed requiring the information on SDSs to be presented using consistent headings in the sequence specified in the GHS (*See* Section XV for a detailed discussion of the requirements). The Agency has determined that a standardized order of information will improve the utility of SDSs by making it easier for users to locate and understand the information they are seeking. A standardized format is also expected to improve the accuracy of the information presented on SDSs.

Since the HCS was promulgated in 1983, access to chemical information has improved dramatically due to the availability of SDSs. OSHA believes that adopting a standardized format will build on the demonstrated benefits that have already clearly been established from the use of SDSs. As discussed in the proposal, the General Accounting Office (GAO) issued a report in May 1992 that addressed issues employers had with complying with the HCS (GAO, 1992, Document ID #0292). The findings were based on the results of a national survey of construction, manufacturing, and personal services

providers. A total of 1,120 responses were received from employers.

One very important finding of the GAO survey was that almost 30% of employers reported that they had replaced a hazardous chemical with a less hazardous substitute because of information presented on an SDS. With regard to the HCS as a whole, GAO found that over 56% of employers reported ''great'' or ''very great'' improvement in the availability of hazard information in the workplace and in management's awareness of workplace hazards. Forty-five percent of those in compliance with the HCS considered the standard to have a positive effect on employees, compared with only 9% who viewed the effect as negative. The results indicate that when chemical hazard information is provided, the result is generally recognized as beneficial to employees. A number of other studies support this conclusion.

Conklin demonstrated the utility of SDSs among employees of a multinational petrochemical company (Conklin, 2003; Document ID #0245). Across three countries (the U.S., Canada, and the United Kingdom), 98 percent felt that the SDS is a satisfactory information source (the percentage was similar across all three countries). Seventy-two percent said they would request an SDS all or most of the time when introduced to a new chemical, although 46 percent of workers said that SDSs are too long. The author notes that this sample did not include any workers with low literacy.

However, while these studies show a clear benefit related to the use of SDS in the workplace, a number of investigations raise concerns that the information on SDSs is not comprehensible to employees. In 1991, OSHA commissioned a study that evaluated the comprehensibility of SDSs by a group of unionized employees in manufacturing industries located in the state of Maryland (Kearney/Centaur, 1991a, 1991b, Document ID #0309 and 0310). The study assessed the ability of these employees to understand information regarding the route of entry of the substance, the type of health hazard present, appropriate protective measures, and sources of additional help.

Each of the 91 participating workers was provided with and tested on four different SDSs. The workers answered the test questions based on information supplied on each of the SDSs. It should be noted that the employees who volunteered for this study understood that it relied on reading comprehension. This created a selection bias, as employees with reading difficulties would not be likely to volunteer for the study.

The results of the tests indicated that workers on average understood about two-thirds of the health and safety information on the SDSs. The best comprehension was associated with information providing straightforward procedures to follow (*e.g.,* in furnishing first aid, dealing with a fire, or in using personal protective equipment) or descriptions of how a chemical substance can enter the body. Workers had greater difficulty understanding health information addressing different target organs, particularly when more technical language was used. Workers also reportedly had difficulty distinguishing acute from chronic effects based on information presented in the SDSs.

Conklin reported a similar result in a study involving employees of a multinational petrochemical company (Conklin, 2003, Document ID #0245). After viewing information on an unfamiliar chemical in a variety of SDS formats, a questionnaire was administered to workers to gauge their comprehension of the material presented. The workers reportedly answered 65 percent of the questions correctly.

The Printing Industries of America reported a study that examined the comprehensibility of SDSs to master printers in 1990 (PIA, 1990, Document ID #0295). The subjects had an average of 13.9 years of formal education, or approximately two years beyond high school. In this study, 27 SDSs were selected and analyzed for reading levels using a software program, finding an average reading grade level of 14. The investigators found that employees with 15 years of education or more understood 66.2% of the information presented.

Some of the difficulty workers experience in understanding information presented on SDSs may be due to the vocabulary used in the document. Information presented at a reading level that exceeds the capability of the user is unlikely to be well understood. An example of this situation was reported by Frazier *et al.* (Frazier *et al.,* 2001, Document ID #0212). The authors evaluated a sample of SDSs from 30 manufacturers of toluene diisocyanate, a chemical known to cause asthma. Half of the SDSs indicated that asthma was a potential health effect. One SDS made no mention of any respiratory effects, while others used language (*e.g.,* allergic respiratory sensitization) that the authors believed may not clearly communicate that asthma is a risk. However, the more technical language meets the requirements of the HCS.

Other reports substantiate the belief that many SDS users have difficulty understanding the information on the documents. For example, in a study evaluating the comprehensibility of SDSs at a large research laboratory, 39 percent of the workers found SDSs ''difficult to understand'' (Phillips, 1997, Document ID #0263). The study also indicated that a third of the information provided on SDSs was not understood. These results were obtained from a study population of literate, trained workers who spoke English as their first language.

Smith-Jackson and Wogalter corroborated this finding in a study involving 60 undergraduates and community volunteers (Smith-Jackson and Wogalter, 1998, Document ID #0188). The subjects were asked to sort SDS data into a logical order. After completing the task, subjects were asked for their opinions on the difficulty of the content. Overall, 43 percent found the information easy to understand, 42 percent said it was not easy, and the remaining 15 percent felt that only scientists, experts, or very experienced workers would be able to understand the information.

These studies are consistent in reporting that workers have difficulty understanding a substantial portion of the information presented on SDSs. This finding can be explained at least in part by the fact that not all of the information on SDSs is intended for workers. SDSs are intended to provide detailed technical information on a hazardous chemical. While they serve as a reference source for exposed employees, SDSs are meant for other audiences as well. SDSs provide information for the benefit of emergency responders, industrial hygienists, safety professionals, and health care providers. Much of this information may be of a technical nature and would not be readily understood by individuals who do not have training or experience in these areas. For example, language that may be readily understood by a population of firefighters may be poorly understood by chemical workers.

In addition, Title III of the Superfund Amendments and Reauthorization Act (SARA, also known as the Emergency Response and Community Right-to-Know Act of 1986) mandated that SDSs be made available to state emergency response commissions, local emergency planning committees, and fire departments in order to assist in planning and response to emergencies, as well as to provide members of the

general public with information about chemicals used in their communities. It is difficult, if not impossible, for a document to meet the informational needs of all of these audiences while being comprehensible to all as well.

Product liability concerns also play a role in the comprehensibility of SDSs. Producers of chemicals may be subject to ''failure to warn'' lawsuits that can have significant financial implications. Attempts to protect themselves against lawsuits can affect the length and complexity of SDSs, as well as the way in which information is presented. In some cases the length and complexity of SDSs reportedly make it difficult to locate desired information on the documents. For example, in testimony before the U.S. Senate Subcommittee on Employment, Safety, and Training, one hospital safety director described a situation in which an employee was unable to find critical information on an SDS in an emergency situation (Hanson, 2004, Document ID #0200):

* * * two gallons of the chemical xylene spilled in the lab of my hospital. By the time an employee had noticed the spill, the ventilation had already sucked most of the vapors into the HVAC. This, in turn, became suspended in the ceiling tile over our radiology department. Twelve employees were sent to the emergency room. To make the matter worse, the lab employee was frantically searching through the MSDS binder in her area for the xylene MSDS. Once she found it, she had difficulty locating the spill response section. After notifying our engineering department, she began to clean up the spill with solid waste rags, known for spontaneous combustion, and placing the rags into a clear plastic bag for disposal. She did not know that xylene has a flash point of 75 degrees Fahrenheit. She then walked the bag down to our incinerator room and left it there, basically creating a live bomb. Twelve people were treated from this exposure. The lab employee was very upset and concerned about the safety of the affected employees and visitors, and hysterically kept stating that she could not find the necessary spill response information.

SDSs at this particular hospital were reported to range from one page to 65 pages in length.

To accommodate the needs of the diverse groups who rely on SDSs, a standardized format has been viewed as a way to make the information on SDSs easier for users to find, and to segregate technical sections of the document from more basic elements. A standardized format was also thought to facilitate computerized information retrieval systems and to simplify employee training.

The first attempt to establish a format for SDS was made in 1985, when OSHA established a voluntary format to assist manufacturers and importers who desired some guidance in organizing SDS information. This two-page form (OSHA Form 174) includes spaces for each of the items included in the SDS requirements of the standard, to be filled in with the appropriate information as determined by the manufacturer or importer. However, some members of the regulated community desired a more comprehensive, structured approach for developing clear, complete, and consistent SDSs.

In order to develop this structure, the Chemical Manufacturers Association (now known as the American Chemistry Council) formed a committee to establish guidelines for the preparation of SDSs. This effort resulted in the development of American National Standards Institute (ANSI) standard Z400.1, a voluntary consensus standard for the preparation of SDSs. Employers, workers, health care professionals, emergency responders, and other SDS users participated in the development process. The standard established a 16-section format for presenting information as well as standardized headings for sections of the SDS. In 2004, an updated version of the ANSI standard that was consistent with the GHS format was published. This ANSI standard has since been combined with the ANSI Z129 consensus standard on precautionary labeling preparation. The ANSI Z400.1/Z129.1 standard was issued in 2010.

By following the recommended format, the information of greatest concern to employees is featured at the beginning of the document, including information on ingredients and first aid measures. More technical information that addresses topics such as the physical and chemical properties of the material and toxicological data appears later in the document. The ANSI standard also includes guidance on the appearance and reading level of the text in order to provide a document that can be easily understood by readers.

OSHA currently allows the ANSI format to be used as long as the SDS includes all of the information required by the HCS. Because it is a voluntary standard, however, the ANSI format has not been adopted by all chemical manufacturers and importers. As a result, different formats are still used on many SDSs.

The International Organization for Standardization (ISO) has published its own standard for SDS preparation. This standard, ISO 11014–1, has been revised for consistency with the GHS (new version issued in 2009). The standard includes the same 16 sections as the GHS, as well as similar data requirements in each section. These two consensus standards, ANSI Z400.1–2004 and ISO 11014–1 (2009), have essentially the same provisions and are consistent with GHS. There are minor differences, such as units of measure recommended in the national ANSI standard versus the international ISO standard.

Another development has been the creation of International Chemical Safety Cards (ICSCs). The documents, developed by the International Programme on Chemical Safety, summarize essential health and safety information on chemicals for use at the ''shop floor'' level by workers and employers (Niemeier, 1997, Document ID #0191). ICSCs are intended to present information in a concise and simple manner, and they follow a standardized format that is shorter (one double-sided page) and less complex than the ANSI approach. The ICSCs were field tested in their initial stages of development, and new ICSCs are verified and peer reviewed by internationally recognized experts (*id.*). ICSCs have been developed in English for 1,646 chemicals, and are also available in 16 other languages. The ICSCs are being updated to be consistent with the GHS.

A study by Phillips compared the effectiveness of different SDS formats as well as ICSCs among workers at a large national laboratory (Phillips, 1997, Document ID #0191). The employees represented a variety of trades, including painters, carpenters, truck drivers, and general laborers. Each worker was tested for knowledge regarding a hazardous chemical before and after viewing an SDS or ICSC. Three designs were tested: a 9-section OSHA form, the 16-section ANSI Z400.1 format (an earlier and slightly different version of the current ANSI Z400.1 format), and the 9-section ICSC. A subsequent paper described the final results of this study (Phillips, 1999, Document ID #0263). All three formats led to significant improvements in subjects' knowledge, and there was no statistically significant difference among the three formats in terms of total test score. However, there were a few significant differences in how well readers of each SDS format answered specific types of questions:

- The ICSC performed better than the OSHA form regarding chronic and immediate health effects.
- The other two formats performed better than the ANSI format on fire-related questions.
- The OSHA form performed better than the other two formats on spill response questions.

▪ The OSHA form performed better than the ANSI format regarding carcinogenic potential.

The ANSI Z400.1 template has been used by a wide number of employers for creating SDSs. By following the recommended format, the information of greatest concern to employees is featured at the beginning of the document, including information on ingredients and first aid measures. More technical information that addresses topics such as the physical and chemical properties of the material and toxicological data appears later in the document. The ANSI standard also includes guidance on the appearance and reading level of the text in order to provide a document that can be easily understood by readers.

The ANSI format is commonly used. However, because it is a voluntary standard, not all chemical manufacturers and importers have adopted it. As a result, different formats are still used on many SDSs. Of the comments received regarding SDS, none were in favor of allowing voluntary adoption of the SDS format. The California Industrial Hygiene Council (CIHC) (Document ID #0463) reiterated its support for a uniform format, and specifically the implementation of the ANSI format for SDSs. The CIHC also stated that a mandatory format would establish a harmonized structure for all ''global target audiences'' (Document ID #0463).

In a separate comparison, Conklin also found similarities in the overall performance of several standard SDS formats (Conklin, 2003, Document ID #0245). In this study, employees of a multinational petrochemical company were given one of three versions of an SDS for an unfamiliar chemical: A U.S. version (OSHA's required content within an ANSI Z400.1–1998 16-part structure); a Canadian version following the 9-part structure prescribed by Canada's Workplace Hazardous Materials Information System (WHMIS); and a version following the European Union's content and 16-part structure. SDSs were controlled for font, layout, and reading level. Overall, Conklin found no statistically significant difference in mean post-test scores using the three different formats, although there were significant differences on 5 out of 10 questions (no one format was consistently better).

OSHA also examined several studies addressing what sequence of information would prove to be most beneficial for users. Because extensive searching can be a barrier to SDS use, researchers have examined whether there is a preferred order of information that more closely matches users' cognitive expectations. Smith-Jackson and Wogalter asked 60 undergraduates and community volunteers to arrange portions of six SDSs in the order they considered most usable (Smith-Jackson and Wogalter, 1998; Document ID #0188). The authors found a few consistent results:

▪ Information about health hazards, protective equipment, and fire and explosion data tended to be placed toward the beginning.

▪ Physical and reactivity data tended to be placed near the end.

▪ Spill or leak procedures were placed near the beginning or the middle, depending on the type of chemical.

A majority of subjects reported that they had attempted to prioritize the hazard information that needed to be communicated. The participants' suggested order of information generally did not match either the original SDS order or the order listed in the HCS—particularly the subjects' emphasis on health hazard information near the beginning.

In the previously discussed 1991 study that evaluated the comprehensibility of SDSs by a group of 91 unionized workers in manufacturing industries in the state of Maryland, a subset of the group (18 workers) was also tested on an ICSC (Kearney/Centaur, 1991a, 1991b, Document ID #0309 and 0310). While the results indicated that workers on average understood about two-thirds of the health and safety information on SDSs, ICSCs provided better results. The average ICSC test score ranged from 6% to 23% higher than the average test score on the four SDSs evaluated. This finding was considered by the authors to suggest that an improved format for SDSs may serve to increase user comprehension of the information presented.

OSHA believes that a standardized format will improve the effectiveness of SDSs for the following reasons: A consistent format makes it easier for users to find information on an SDS. Headings for SDS sections are standardized, so SDS users know which section to consult for the information they desire. The sections are presented in a consistent, logical sequence to further facilitate locating information of interest. Information commonly desired by exposed employees and of greatest interest to emergency responders (*e.g.,* Hazards Identification; First Aid Measures) is presented in the beginning of the document for easy reference. More technical information (*e.g.,* Stability and Reactivity; Toxicological Information) is presented later.

Specifically, the revised SDS format now segregate more complex information from information that is generally easier to understand. This order of information places basic information in the first sections, allowing SDS users to find basic information about hazardous chemicals without having to sift through a great deal of technical information that may have little meaning to them. In emergency situations, rapid access to information such as first-aid measures, fire-fighting measures, and accidental release measures can be critically important.

Several stakeholders expressed dissatisfaction with the degree that current SDSs vary from manufacturer to manufacturer (Document ID #0330 and 0351). The International Brotherhood of Teamsters stated that the quality and usefulness of SDSs has been grossly inconsistent in terms of content and format, adding that such discrepancies ultimately result ''in a failure to achieve the objective of the standard'' (Document ID #0357). John Schriefer, head of Local 9477, indicated that workers often didn't bother to request SDSs, because they are so complicated (Document ID #0494 Tr. 54–55). He suggested that a simplified, standard format for SDSs would go a long way toward improving worker safety (Document ID #0494 Tr. 63).

Commenters supported putting information targeted to the employees first on the SDS in order to improve how emergency situations are addressed (Document ID #0332, 0386 and 0414). Stericycle, Inc. supported placing hazard identification information in one location rather than ''sprinkling it through the documents, as is sometimes the case with [SDSs]'' (Document ID #0338). United Steelworkers stated that the difficulty in locating information on current SDSs ''is bad enough with routine assessments, but in an emergency situation like a spill, splash or fire it can be deadly'' (Document ID #0402). Additionally, the American Wind Energy Association argued that requiring hazard identification and first aid information to be placed in the first sections of the SDS would serve to ''better assist emergency response teams to more efficiently recognize hazards during incidents'' (Document ID #0386). American Federation of State, County and Municipal Employees (AFSCME) also supported the adoption of a standardized SDS, reasoning that it would enable workers to better understand SDSs, and could ultimately lead to faster responses as well as a reduction in the number of incidents altogether (Document ID #0386).

A standardized format does not address all issues affecting SDS comprehensibility. Reading level and some design elements would continue to vary. In many respects, this is inevitable given the different target audiences that SDSs have, and the varying qualifications of those who prepare SDSs. Nevertheless, OSHA believes that the revisions will result in a substantial improvement in the quality and ease of comprehension of information provided on SDSs.

In addition to the issues regarding comprehensibility, researchers raised concerns that some SDSs may be incomplete or contain erroneous information. The magnitude of the problem is unclear, because only very limited numbers of SDSs have been evaluated in these studies, and in some cases the investigations were performed so long ago that the results may not reflect current practices. Nevertheless, the evidence appears to indicate that a substantial number of SDSs may not contain complete and correct information.

An initial examination of the accuracy of SDSs was commissioned by OSHA shortly after the scope of the rule was expanded to cover all industries in 1987 (Karstadt, 1988, Document ID #0296). The report, which analyzed the content of 196 SDSs for products used in auto repair and body shops, provided a general indication that the content and presentation of information was inconsistent on the SDSs examined. In 1991, OSHA commissioned an additional study that examined the accuracy of SDSs (Kearney/Centaur, 1991a, 1991b, Document ID #0309 and 0310). The study examined information presented in five areas considered crucial to the health of workers potentially exposed to hazardous substances. The five areas assessed were: Chemical identification of ingredients; reported health effects of ingredients; recommended first aid procedures; use of personal protective equipment; and exposure level regulations and guidelines. The evaluation indicated that 37% of the SDSs examined accurately identified health effects data, 76% provided complete and correct first aid procedures, 47% accurately identified proper personal protective equipment, and 47% correctly noted all relevant occupational exposure limits. Only 11% of the SDSs were accurate in all four information areas, but more (51%) were judged accurate, or considered to include both accurate and partially accurate information, than were judged inaccurate (10%). The study also concluded that the more recent SDSs examined (those prepared between 1988 and 1990) appeared to be more accurate than those prepared earlier.

This belief that some SDSs are not complete and correct was corroborated by an examination of SDSs for lead and ethylene glycol ethers (Paul and Kurtz, 1994, Document ID #0302). Although these substances are known reproductive and developmental toxicants, researchers found that 421 of 678 SDSs examined (62%) made no mention of effects on the reproductive system. OSHA also commissioned a study, completed in 1999, focusing specifically on the accuracy of first aid information provided on SDSs (Lexington Group, 1999, Document ID #0257). A total of 56 SDSs for seven chemicals were examined. First aid information on the SDSs was compared with information from established references. The researchers reported that nearly all of the SDSs reviewed had at least minor inaccuracies.

A standardized format does not directly address the concerns that have been raised regarding the accuracy of information present on SDSs. However, standardization would improve the accuracy of chemical hazard information indirectly. With consistent presentation of information, the task of reviewing SDSs and labels to ensure accuracy will be simplified. Individuals preparing and reviewing these documents should find it easier to identify any missing elements and compare information presented on an SDS to reference sources and other SDSs. OSHA enforcement personnel will be able to more efficiently examine SDSs when conducting inspections. The detailed entries for SDSs are particularly noteworthy in this regard. The sub-headings provide an organized and detailed list of pertinent information to be included under the headings on the SDS. For example, while the HCS currently requires physical and chemical characteristics of a hazardous chemical to be included on the SDS, the final rule provides a list of 18 properties for Section 9 of the SDS. The party preparing the SDS must either include the relevant information for these entries, or indicate that the information is not available or not applicable. This approach provides both a reminder to the party preparing the SDS regarding the information required and a convenient means of reviewing the section to ensure that relevant information is included and is accurate.

Additionally, several stakeholders agreed that standardization would result in improved accuracy of the information on SDSs. For example, Ecolab, Inc. stated that a uniform approach to hazard classification and labeling would improve the accuracy of the information presented on labels and SDSs and reduce ''the currently observed variability among suppliers in chemical classification and presentation of that information'' (Document ID #0351). Additionally, American Iron and Steel Works noted that ''standardized criteria to evaluate and communicate hazards via SDSs * * * should assure consistent communication and lower the likelihood of miscommunication and misinterpretation'' (Document ID #0408). Alliance for Hazardous Materials Professionals also indicated that the standardization of SDSs is likely to ''resolve language and content inconsistencies among similar product providers'' (Document ID #0327).

OSHA concludes that the classification criteria included in the final rule will also improve the accuracy and precision of information on SDSs. The detailed criteria provided will direct evaluators to the appropriate classification for a chemical. For example, while directing the evaluator to use expert judgment in taking all existing hazard information into account, the criteria for serious eye damage/eye irritation is tied to specific results found in animal testing. In addition, assignment to hazard categories would lead to provision of detailed information that would be specific to the degree of hazard presented by the chemical.

Classification of hazards will play an important role in increasing the usefulness of SDSs under the final rule. By including the classification of the substance on the SDS, employers will be in a much better position to compare the hazards of different chemicals. Hazard categories generally give an indication of the severity of the hazard associated with a chemical. For example, all other things being equal, a chemical classified for skin corrosion/irritation in category 1 as a skin corrosive would be more hazardous than a chemical classified in category 2 as a skin irritant. If chemicals are classified into hazard categories, this information can be used to simplify the process of comparing chemicals. As noted previously, employers use SDSs as a means of comparing chemical hazards to select less hazardous alternatives. Thus, it is reasonable to conclude that this final rule will result in more effective use of the SDS as an instrument for identifying less hazardous substitutes for hazardous chemicals.

Stakeholders have expressed support for a standard SDS format. The development of an industry consensus standard for preparation of SDSs, ANSI

Z400.1, in itself, shows a desire on the part of many parties for a consistent approach to SDSs. The final rule follows the same section and sequence as the ANSI Z400.1, which was updated in 2004 and combined with the ANSI 129 standard in 2010.

A report drafted by the GAO recommended that OSHA clearly specify the language and presentation of information on SDSs (GAO, 1991, Document ID #0292). In addition, the report of the National Advisory Committee for Occupational Safety and Health Review of Hazard Communication (September 12, 1996) indicated that during the public presentations and workgroup discussions, there was general agreement that a uniform format should be encouraged, and most workgroup members agreed that OSHA should endorse use of the ANSI Z400.1 format (NACOSH, 1996, Document ID #0260).

Comments received in response to the ANPR indicated widespread support for a standard format for SDS (*See, e.g.,* Document ID #0030, 0054, 0064, 0124, and 0158). The American Foundry Society, for example, said that consistent SDSs make it easier for users to find information and compare products (Document ID #0158). The Jefferson County Local Emergency Planning Committee maintained that critical information can be missed by first responders due to the current lack of consistency in presentation of information on SDSs, stating: ''It is not overreaching for us to say that lives will be saved through harmonization'' (Document ID #0037).

Moreover, stakeholder response to the NPRM also overwhelmingly supported requiring a consistent, standardized format for SDSs (Document ID #0307, 0313, 0321, 0322, 0328, 0329, 0330, 0335, 0341, 0344, 0349, 0352, 0357, 0365, 0372, 0374, 0381, 0382, 0383, 0386, 0389, 0392, 0393, 0403, 0404, 0405, 0410, 0415, 0456, and 0463). American Subcontractors of America stated that a standardized format would make SDSs a more effective resource and better educational tool (Document ID #0322). Additionally, the Communications Workers of America asserted that standardizing SDSs would be an invaluable solution for addressing current inconsistencies and quality issues on SDSs (Document ID #0349).

Based on the studies and comments in the record, OSHA has concluded that not only will the standardized SDS format indirectly improve the quality of information provided on SDSs, but that it is in the format that stakeholders already know and overwhelmingly prefer.

Training

Along with labels on containers and SDSs, employee training is one of three core components of a comprehensive hazard communication program. Training is needed to explain and reinforce the information presented on labels and SDSs, to ensure that employees understand the chemical hazards in their workplace and are aware of the protective measures they need to follow. The final rule includes a relatively minor revision to the existing HCS training requirements for employers to train employees on the label elements and SDS format. This revision is intended to ensure that labels and SDSs are adequately explained to employees (*See* Section XIII for a detailed discussion of the training requirements). In light of the evidence discussed and new information submitted to the record related to label and SDS comprehension, the importance of training should not be underestimated.

Training is necessary to ensure that employees understand the standardized headings and sequence of information on SDSs. Likewise, employees must be able to understand the meaning of the standardized label elements in order for them to be effective. In certain instances, label elements already appear to be fairly well understood. For example, ''Danger'' appears to be generally recognized to represent a higher degree of hazard than ''Warning.'' Other label elements, particularly some pictograms, are less well understood. This finding is not surprising given the limited amount of exposure that most of the population has had to some of these pictograms.

A relatively high level of understanding is generally recommended for pictograms. For example, ANSI Z535.3, the American National Standard that addresses criteria for safety symbols (Document ID #0276), contains a test method for determining the effectiveness of a pictogram. The criterion for a successful, effective pictogram is 85% correct responses, with no more than 5% critical confusion. (Critical confusion refers to when the message conveyed is the opposite of the intended message.) A score below 85% does not mean the pictogram should not be used, but rather that it should not be used without some additional element, such as written text. The International Standards Organization has similar criteria in ISO 9186, Procedures for the Development and Testing of Public Information Symbols (Document ID #0255). This standard recommends testing methodologies to evaluate symbols intended to be used internationally. It sets a somewhat lower level of acceptability (66%) than the ANSI standard.

While initial understanding of some pictograms may not be satisfactory, research shows that training can improve comprehension. In one study, Wogalter *et al.* tested how well undergraduate subjects comprehended a set of 40 pharmaceutical and industrial safety pictorials before and after training (Wogalter *et al.,* 1997c, Document ID #0288). Training led to a significant increase in pictorial comprehension. The improvement was greatest for the most complex symbols. Training was equally effective whether the subject was given a simple printed label (*e.g.,* ''Danger, cancer-causing substance'') or a label with additional explanatory text.

Lesch conducted a similar study, testing how well workers recognized a set of 31 chemical and physical safety symbols before and after training (Lesch, 2002, Document ID #0246; Lesch, 2003, Document ID #0282). Training significantly improved comprehension, which remained higher up to 8 weeks later. As in the Wogalter *et al.* study described above, Lesch found little difference in performance whether training took the form of a written label assigned to each symbol, a label plus explanatory text, or an accident scenario. Training also improved response speed.

In a survey of South African workers, London examined the impact of brief training on the meaning of symbols and hazard phrases (London, 2003, Document ID #0311). Here, the author found no statistical difference in comprehensibility of four familiar hazard symbols, but did find that training improved comprehension of one symbol (the GHS health hazard symbol), and it also reduced the overall incidence of critical confusion. This study also found that workers with previous workplace training were more likely to understand label text and some pictograms, and were better able to identify the active ingredient. Banda and Sichilongo reported a similar result in their evaluation of GHS labels in Zambia. The authors found that ''correct responses to label elements were not a result of social class and/or age but appeared to be influenced by extent of duration of exposure either through specialized training or acquaintance'' (Banda and Sichilongo, 2006, Document ID #0237). Recognizing that symbols are the items most often recalled from a label, London advised a strong emphasis on training for GHS symbols, particularly the ''flame over circle'' and

''flame'' symbols—which were reported to be easily confused—and other symbols that may generate critical confusion (London, 2003, Document ID #0311).

NIOSH, in its post-hearing comments, provided the following additional studies. These studies support OSHA's position that training ensures the understanding of standardized label elements (pictograms, signal words, hazard statement, and precautionary statements) and is an essential part of an effective hazard communication program.

Burt *et al.* (1999, Document ID #0480.1) conducted an ergonomic study of correct lifting posture. The project included three separate studies: using 135 undergraduate students, Study 1 consisted of a questionnaire to evaluate nine symbols to select the most appropriate symbols to encourage correct lifting posture. Four of the symbols used in Study 1 met the appropriateness criteria and were used in Study 2 by 21 city council workers to test their understanding of each symbol. Using 100 random subjects, Study 3 was a field test that examined the effect of the best performing symbol (from Study 2) on subjects when asked to lift a box. Burt *et al.* found that once trained on the meaning of a label, the presence of a standard recognized label prompted the test subject to take the proper action. The author also found significant increases in correct lifting posture when a symbol was present compared with a control condition in which people were trained in correct lifting techniques, but did not see the symbol as a reminder.

In 2007, Lesch (Document ID #0480.3) conducted a study looking at different training conditions. During the training, warning symbols with labels (to better explain the meaning of the symbol) were paired with accident scenarios. The accident scenarios illustrated the nature of the hazard, the required or prohibited actions, and the possible consequences of failing to comply with the warning. The participants were tested before and following the training (immediately after and two weeks later). The results showed the benefits of training—improved comprehension, reduced reaction times, and an improved confidence in their responses—and illustrated that, by strengthening the connections between the warning symbol and its associated meaning, accident scenario training can be used to prevent accidents and injuries.

In 2007, Su and Hsu (Document ID #0480.5) tested 1,000 college students on their perception of GHS labels and traffic safety signs. The study found that students who had taken training did better in perceiving various traffic safety signs than those who did not. With regards to chemical labeling, students who had taken hazard communication training had better perception ratings than those without training. Analysis showed that 17 out of 27 hazards had perception ratings lower than 66%, the ISO suggested acceptable rate for a good sign. The statistical analysis used in the study indicated that pictograms should not be used alone but accompanied by warning statements or other kinds of textual materials. The study also suggested that training on pictograms and warning statements should be integrated into school curriculum.

Rother (2008, Document ID #0480.4) conducted a study to assess how South African farm workers interpret the pictograms used in the pesticide industry. Administered to 115 farm workers from commercial vineyards in Western Cape, South Africa, this study used a questionnaire designed to interpret the workers' understanding of 10 pictograms commonly used in the pesticide industry. Fifty percent or more of the study participants had misleading, incorrect, or critically confused interpretations of the label pictograms. The study identified a response as critically confused when a farm worker incorrectly interpreted a pictogram to require an action or behavior that would increase his or her health risks. OSHA agrees with NIOSH's interpretation that the study ''found that lack of training severely affected farm worker's abilities to correctly interpret pesticide pictogram warning labels'' (Document ID #0470).

These reports reinforce OSHA's longstanding belief that labels, SDSs, and training are complementary parts of a comprehensive hazard communication program—each element reinforces the knowledge necessary for effective protection of employees. The need for training to ensure comprehension of hazard information is widely recognized. Annex A of ANSI Z535.2 (the American National Standard for Environmental and Facility Safety Signs) (Document ID #0277), for example, recommends training on the meaning of standard safety symbols and signal words, and ANSI Z535.4 (Document ID #0278) contains similar guidance.

OSHA received many comments supporting the importance of training (*See, e.g.,* Document ID #0329, 0331, 0347, 0370, 0382, 0387, 0412, 0527, 0640, 0644, and 0647). The National Institute of Occupational Safety and Health (NIOSH) (Document ID #0412) stated:

> Training is key to ensuring effective hazard communication. Although written information is important, training is an opportunity to explain the data and helps to ensure that the messages are being received accurately so they can be acted on appropriately.

The USW stated that ''there is no question good training greatly improves the ability to understand chemical labeling and safety data sheets. Unfortunately, the OSHA standard is vague * * *'' (Document ID #0403). Several organizations, including Western Region Universities Consortium, ORC Worldwide, SOCMA, NIOSH, Building & Construction Trades Department of AFL–CIO, NIEHS, and USW (*e.g.,* Document ID #0331, 0370, 0402, 0412, 0527, 0640, and 0647) stated that training, though essential, is often not done well, and urged OSHA to ''strengthen training requirements and worker protection'' (Document ID #0331).

Others, such as DuPont, API, Michelle Sullivan, ACC, and American Iron and Steel Institute/American Coke & Coal Chemicals Institute, stated that the standardized SDS and label format should facilitate training efforts and the overall effectiveness of hazard communication in industry (Document ID #0329, 0376, 0382, 0393, and 0408). The American Iron and Steel Institute stated: ''Standardized criteria to evaluate chemicals should facilitate training. With a single teaching format for SDSs and Labels, understanding, regardless of an employee's educational background, should be improved'' (Document ID #0408).

OSHA not only received many comments indicating that the training requirements in the HCS are not adequate, several organizations requested that OSHA either add regulatory text or a mandatory appendix specifying training content, frequency, and methods of evaluation (Document ID #0331, 0340, 0347, 0349, 0357, 0403, 0414, 0456, 0640, and 0647). For example, the National Institute of Environmental Health Sciences Worker Education and Training Program (NIEHS WETP) (Document ID #0347 and, 0516) provided training information, including a training program guidance manual, and an outline detailing specific training topics for the HCS.

OSHA agrees that training is important for ensuring effective hazard communication. However, OSHA did not propose to change the training provisions in the HCS other than initial training on the new GHS elements.

Similarly, the GHS discusses the importance of training, but does not contain specific training requirements. Since the purpose of this rulemaking is to align with the requirements of the GHS, OSHA did not propose modifications that were outside of those necessary to maintain alignment with the GHS. OSHA has decided to stay within the scope of the rulemaking and retain the proposed training provisions in the HCS final rule. *See* Section XIII for a more detailed discussion on training.

Conclusion

It is a longstanding Agency position that employees have the ''right to know'' and understand the hazards of chemicals they are exposed to in the workplace (53 FR 29826, Aug. 8, 1988; 59 FR 6126, Feb. 9, 1994). This knowledge is needed in order to take the precautions necessary for safe handling and use, to recognize adverse health effects associated with chemical exposure, and to respond appropriately in emergency situations.

Equally important in terms of employee protection is that employers have access to chemical hazard information as well. Chemical information is the foundation of workplace chemical safety programs—without it, sound management of chemicals is impossible. By ensuring that emergency responders, physicians, nurses, industrial hygienists, safety engineers and other professionals have the information they need, the HCS reduces the likelihood of chemical source illnesses and injuries. Selection of appropriate engineering controls, work practices, and personal protective equipment is predicated upon knowing the chemicals that are present, the form they are present in, and their hazardous properties.

In his testimony at the informal public hearings, Mr. David Irby, a union safety representative at the Severstal Steel Plant in Sparrows Point, Maryland, expressed the importance of the right to understand SDSs, stating that employees ''need an easy-to read format written in a clear, precise and understandable manner in our workplace'' (Document ID #0494 Tr. 55–57). OSHA agrees that employees must be able to read and comprehend the information presented on both labels and SDSs so that they can respond accordingly. Therefore, OSHA has determined that the provisions in this final rule—the standardized label elements (including pictograms, signal words, and hazard and precautionary statements), a standardized 16-section SDS, and the requisite training provisions—provide the necessary conventions to support understanding the hazards posed by chemicals in the workplace and that this final rule provides employees not only with the ''right to know'' but also the ''right to understand.''

OSHA concludes that aligning the HCS with the GHS will improve the quality and consistency of the chemical hazard information provided to employers and employees. A combination of label elements—signal word, hazard statement(s), pictogram(s), and precautionary statement(s)—is expected to make label warnings more noticeable and easier to understand, and will better communicate hazard and precautionary information. Standardized headings and a consistent order of information are anticipated to make it easier for users to find information on SDSs, improve their accuracy, and better enable users to compare the relative hazards of different substances. Along with effective training in the context of a comprehensive chemical hazard communication program, OSHA has determined that these revisions will more adequately inform employees of chemical hazards, and lead to better protections in the workplace.

V. Pertinent Legal Authority

The primary purpose of the Occupational Safety and Health Act (the ''OSH Act'' or ''Act'') (29 U.S.C. 651 *et seq.*) is to assure, so far as possible, safe and healthful working conditions for every American employee over the period of his or her working lifetime. One means prescribed by Congress to achieve this goal is the mandate given to, and the authority vested in, the Secretary of Labor to ''promulgate, modify, or revoke'' mandatory occupational safety and health standards. OSH Act § 6(b), 29 U.S.C. 655(b).

An occupational safety and health standard is defined under the Act as:

> [A] standard which requires conditions, or the adoption or use of one or more practices, means, methods, operations, or processes, reasonably necessary or appropriate to provide safe or healthful employment and places of employment.

OSH Act § 3(8), 29 U.S.C. 652(8). The Supreme Court has interpreted this provision as requiring OSHA to determine, before promulgating a permanent standard under section 6(b) of the Act, that the standard is reasonably necessary and appropriate to remedy a significant risk of material health impairment. *Indus. Union Dep't* v. *Am. Petroleum Inst.,* 448 U.S. 607, 642 (1980) (''*Benzene*''). This ''significant risk'' determination constitutes a finding that, absent the change in practices mandated by the standard, the workplace in question would be ''unsafe'' in the sense that employees would be threatened with a significant risk of harm. *Id.*

Section 6(b)(5) provides that:

> The Secretary, in promulgating standards dealing with toxic materials or harmful physical agents under this subsection, shall set the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity even if such employee has regular exposure to the hazard dealt with by such standard for the period of his working life. Development of standards under this subsection shall be based upon research, demonstrations, experiments, and such other information as may be appropriate. In addition to the attainment of the highest degree of health and safety protection for the employee, other considerations shall be the latest available scientific data in the field, the feasibility of the standards, and experience gained under this and other health and safety laws. Whenever practicable, the standard promulgated shall be expressed in terms of objective criteria and of the performance desired.

29 U.S.C. 655(b)(5).

Thus, once OSHA determines that a significant risk due to a health hazard is present and that such risk can be reduced or eliminated by a proposed standard, section 6(b)(5) requires it to issue the standard, based on the best available evidence, that ''most adequately assures'' employee protection, subject only to feasibility considerations. As the Supreme Court has explained, in passing section 6(b)(5) ''Congress * * * plac[ed] the 'benefit' of worker health above all other considerations save those making attainment of this 'benefit' unachievable.'' *Am. Textile Mfrs. Inst. Inc.* v. *Donovan,* 452 U.S. 490, 509 (1981) (''*Cotton Dust*''). Where, however, there are two equally effective methods of reducing significant risk to the most protective feasible level, OSHA must choose the less costly method. *See Cotton Dust,* 452 U.S. 490, 513 n.32; *Int'l Union, UAW* v. *OSHA,* 37 F.3d 665, 668 (D.C. Cir. 1994).

In addition, section 6(b)(7) of the Act provides in part that:

> Any standard promulgated under this subsection shall prescribe the use of labels or other appropriate forms of warning as are necessary to insure that employees are apprised of all hazards to which they are exposed, relevant symptoms and appropriate emergency treatment, and proper conditions and precautions of safe use or exposure.

29 U.S.C. 655(b)(7). Section 6(b)(7)'s labeling and employee warning

requirements provide basic protections for employees in the absence of specific permissible exposure limits, particularly by providing employers and employees with information necessary to design work processes that protect employees against exposure to hazardous chemicals in the first instance. The Supreme Court has recognized such protective measures that may be imposed in workplaces where chemical exposure levels are below that for which OSHA has found a significant risk. *Benzene,* 448 U.S. at 657–58 & n.66. In *Benzene,* the Court relied on section 6(b)(7) to sanction OSHA's requirements for monitoring and medical testing when it sets a permissible exposure limit ''in reliance on less-than-perfect methods.'' *Id.* These requirements serve as a ''backstop,'' the Court said, allowing OSHA to check the validity of its assumptions in developing the PEL, and employers to remove particularly susceptible workers before they suffered any permanent damage. *Id.* at 657–58; *See also Nat'l Cottonseed Products Ass'n* v. *Brock,* 825 F.2d 482, 485–87 (D.C. Cir. 1987) (upholding decision to retain medical monitoring requirement while revoking PEL to ''provide a backstop if that judgment is incorrect and this surveillance will protect the health of the employees'').

In promulgating a standard under the Act, OSHA's determinations will be deemed conclusive if they are ''supported by substantial evidence in the record considered as a whole.'' OSH Act § 6(f), 29 U.S.C. 655(f). When the standard deals with toxic materials or harmful physical agents, OSHA must use the ''best available evidence.'' Such evidence includes ''the latest scientific data in the field,'' ''research, demonstrations, experiments, and such other information as may be appropriate,'' and ''experience gained under this and other health and safety laws.'' OSH Act § 6(b)(5), 29 U.S.C. 655(b)(5). The Supreme Court has held that OSHA is not required to support its finding of significant risk of material health impairment ''with anything approaching scientific certainty'' and that the determination of whether a level of particular risk is '''significant' will be based largely on policy considerations.'' *Benzene,* 448 U.S. at 655–56 & n.62.

The OSH Act allows the Secretary to ''modify'' and ''revoke'' existing occupational safety or health standards. OSH Act § 6(b)(2); 29 U.S.C. 655(b)(2). In passing the Act, Congress recognized that OSHA should revise and replace its standards as ''new knowledge and techniques are developed.'' S. Rep. 91–1282 at 6 (1970). The Supreme Court has observed that administrative agencies ''do not establish rules of conduct to last forever, and * * * must be given ample latitude to adapt their rules and policies to the demands of changing circumstances.'' *Motor Vehicle Mfrs. Ass'n* v. *State Farm Mut. Auto. Ins. Co.,* 463 U.S. 29, 42 (1983) (internal quotation marks and citations omitted).

A. Legal Authority for the Current HCS

OSHA's Hazard Communication Standard (''HCS'') is a standard promulgated under the authority of sections 6(b)(5) and 6(b)(7) of the Act (29 U.S.C. 655(b)(5) and 655(b)(7)). *See Associated Builders and Contractors, Inc.* v. *Brock,* 862 F.2d 63, 67–68 (3rd Cir. 1988); *United Steelworkers of Am.* v. *Auchter,* 763 F.2d 728, 738 (3rd Cir. 1985); *United Steelworkers of Am.* v. *Auchter,* 819 F.2d 1263, 1267 (3rd Cir. 1987). Authority for the HCS may also be found in section 8(c) and 8(g) of the Act, 29 U.S.C. 657(c) and 657(g). Section 8(c)(1) of the Act requires employers to make, keep, and preserve records regarding activities related to the Act and to make such records available to the Secretary pursuant to regulations that the Secretary may prescribe. 29 U.S.C. 657(c)(1). Section 8(g)(2) of the Act authorizes the Secretary to ''prescribe such rules and regulations as [she] may deem necessary to carry out [her] responsibilities under this Act * * *.'' 29 U.S.C. 657(g)(2).

As a 6(b)(5) standard, OSHA was required to establish that the HCS would substantially reduce a significant risk of material harm. Some OSHA standards protect employees from exposure to a concentration of a hazardous substance that OSHA has found to create a significant risk of material health impairment. Thus, in making the significant risk determination in these cases, OSHA is concerned with determining the level at which a significant risk arises.

OSHA took a different approach to its significant risk determinations in promulgating the HCS in 1983 and revising it in 1994. The agency relied on NIOSH data showing that about 25 million, or about 25% of, American employees were potentially exposed to one or more of 8,000 NIOSH-identified chemical hazards and that, for the years 1977 and 1978, more than 174,000 illnesses were likely caused by workplace exposure to hazardous chemicals. 48 FR 53280, 53282 (Nov. 25, 1983). It then noted the consensus evident in the record among labor, industry, health professionals, and government that an ''effective federal standard requiring employers to identify workplace hazards, communicate hazard information to employees, and train employees in recognizing and avoiding those hazards'' was necessary to protect employee health. *Id.* at 53283.

Thus, OSHA found that because:

> * * * inadequate communication about serious chemical hazards endangers workers and that the practices required by this standard are necessary or appropriate to the elimination or mitigation of these hazards, the Secretary is hereby able to make the threshold ''significant risk'' determination that is an essential attribute of all permanent standards.

Id. at 53321. The U.S. Court of Appeals for the Third Circuit agreed that ''inadequate communication is itself a hazard, which the standard can eliminate or mitigate.'' *United Steelworkers* v. *Auchter,* 763 F.2d at 735. The Third Circuit has upheld OSHA's finding of significant risk as sufficient to justify the HCS on several occasions. *See Associated Builders and Contractors,* 862 F.2d at 67 (discussing the history of its review of the issue). OSHA reaffirmed its finding of significant risk in adopting revisions to the HCS in 1994. 59 FR 6126, 6136–40 (Feb. 9, 1994).

A characteristic of hazard communication that OSHA confronted in adopting the HCS is that information about the hazards associated with a particular chemical, and the exposures associated with its use, is not uniformly distributed across industry. That is, chemical manufacturers and importers tend to have greater knowledge and scientific expertise with respect to the composition of the chemicals they make or import than do downstream employers. *See* 48 FR at 53322 (Nov. 25, 1983). Therefore, manufacturers and importers are usually in the best position to assess the inherent hazards associated with them. *Id.* However, it is the downstream users and their employees who tend to have the best information about the means and methods of exposure, and are therefore usually in the best position to determine the risk arising from the use of the chemical in their workplaces. *See* 48 FR at 53307 (Nov. 25, 1983); 59 FR at 6132–33 (Feb. 9, 1994).

OSHA's approach in promulgating the HCS reflects this reality. It places the duty to ascertain and disclose chemical hazards on manufacturers and importers, so that downstream users can use this information to avoid harmful exposures to chemical hazards. But because manufacturers and importers will often have less information about the particular exposures of downstream users, their hazard assessment and communication obligations are imposed only for all normal conditions of use of

their chemicals and foreseeable emergencies associated with those chemicals. 29 CFR 1910.1200(b)(2).

In previous rulemakings, OSHA rejected suggestions that the hazard assessment and communication obligations should arise only where the downstream use creates a significant risk because it is difficult, if not impossible, for OSHA or manufacturers and importers to know where these risks might occur before the fact. 48 FR at 53295, 53296, 53307 (Nov. 25, 1983; 59 FR at 6132 (Feb. 9, 1994). Further, it is only by the provision of hazard information that downstream employers and employees can determine how to use the chemical so that exposure and risk may be minimized. *Id.* Thus, the HCS protects employees from significant risk by requiring communications about all chemicals that may present a hazard to employees, regardless of the exposure or risk levels any particular downstream user might actually experience. *See Durez Div. of Occidental Chem. Corp.* v. *OSHA,* 906 F.2d 1, 3–4 (D.C. Cir. 1990); *General Carbon Co.* v. *OSHRC,* 860 F.2d 479, 484–85 (D.C. Cir. 1988).

For these reasons, hazard communication—as opposed to risk communication—''most adequately assures'' employee protection from the significant risk of material impairment of health arising from the use of hazardous chemicals in the workplace for purposes of OSHA's authority under section 6(b)(5) of the Act. In addition, the HCS is authorized under section 6(b)(7), which requires OSHA to prescribe ''labels or other appropriate forms of warning as are necessary to insure that employees are apprised of all hazards to which they are exposed, relevant symptoms and appropriate emergency treatment, and proper conditions and precautions of safe use or exposure.'' 29 U.S.C. 655(b)(7). As noted above, the *Benzene* case recognizes that the ''backstop'' provisions of section 6(b)(7) allow OSHA to impose information requirements even before the employee is exposed to the significant risk. In this way, the HCS ensures that employers and employees have the information they need to avoid situations of exposure in the workplace even before the employee is exposed to a hazardous chemical. As OSHA explained in the preamble to the 1994 HCS amendments: ''OSHA has concluded that imposing informational requirements is necessary and appropriate to protect workers even when OSHA has not determined that the level of risk at a particular worksite warrants a substance-specific standard that would employ more elaborate types of controls.'' 59 FR at 6132 (Feb. 9, 1994).

B. Authority for the Final Rule

1. Section 6(b)(7) Authority. OSHA has authority to adopt the revisions to the HCS made in the final rule under the last sentence of section 6(b)(7) of the Act, which provides that:

> The Secretary, in consultation with the Secretary of Health and Human Services, may by rule promulgated pursuant to section 553 of title 5, United States Code, make appropriate modifications in the foregoing requirements relating to the use of labels or other forms of warning, monitoring or measuring, and medical examinations as may be warranted by experience, information, or medical or technological developments acquired subsequent to the promulgation of the relevant standard.

29 U.S.C. 655(b)(7).

This provision exempts modifications to hazard communication, monitoring, and medical examination requirements from the standard-setting requirements of section 6(b), and so evidences Congress's intent to provide OSHA with an expedited procedure to update these requirements. OSHA believes that exercise of this authority does not require a new finding of significant risk. As noted above, the ''backstop'' 6(b)(7) requirements of hazard communication, exposure monitoring, and medical surveillance may be imposed even in the absence of a significant risk finding. *See Benzene,* 448 U.S. at 657–58; *Nat'l Cottonseed Products Ass'n,* 825 F.2d at 485–87. The last sentence of section 6(b)(7) merely allows these requirements to be updated to reflect the latest knowledge available. The authorization to use Administrative Procedure Act notice and comment procedures rather than the more elaborate framework established by section 6(b) demonstrates congressional intent to treat such modifications differently from rulemakings to adopt standards. Congress envisaged a simple, expedited process that is inconsistent with the idea that OSHA must undertake additional significant risk analyses before exercising this authority.

Rather than requiring a finding of significant risk, the last sentence of section 6(b)(7) provides other assurances that OSHA is exercising its authority appropriately: by requiring the involvement of the Secretary of Health and Human Services, and by limiting the authority only to modifications that are based on ''experience, information, or medical or technological developments'' acquired since the promulgation of the standard in the limited areas of hazard communication, monitoring, and medical examinations. Therefore, OSHA need not make any new significant risk findings; rather, the final rule is supported by the significant risk findings that OSHA made when it adopted the current HCS.

OSHA has used the authority of section 6(b)(7) in the past to revise its standards. *See, e.g.,* Standards Improvement Project-Phase II, 70 FR 1112 (Jan. 5, 2005); Standards Improvement (Miscellaneous Changes) for General Industry and Construction Standards, 63 FR 33450, 33458 (June 18, 1998). For example, it used this authority to revise the inorganic arsenic and coke oven emissions standards to eliminate the requirement of sputum cytology testing and to reduce the required frequency of mandatory chest x-rays from semi-annual to annual. 63 FR at 33458 (June 18, 1998). OSHA justified these changes on the grounds that studies reported after the promulgation of the relevant standards showed that sputum cytology did not improve employee survival rates and that the survival rates when semi-annual x-rays were used were not higher than when annual exams were administered. 63 FR at 33458–59 (June 18, 1998). In addition, OSHA has used its section 6(b)(7) authority to authorize new respirator fit protocols under its respiratory protection standard. 69 FR 46986 (Aug. 4, 2004); *See generally* 29 CFR 1910.134 App. A, Pt. II. On neither occasion has OSHA made new findings about significant risk.

The final rule fits well within the authority granted by the last sentence of section 6(b)(7). Adoption of GHS provisions constitutes a ''modification[]'' of the HCS regarding ''the use of labels or other forms of employee warning.'' For the reasons summarized above and explained more fully elsewhere in this preamble, OSHA believes that the adoption of GHS is ''appropriate'' based on ''experience, information, or medical or technological developments acquired subsequent to the promulgation of the relevant standard.'' The formulation of GHS may also be considered a ''technological development'' that has occurred since the promulgation of the original standard in 1983. GHS was negotiated and drafted through the involvement of labor, industry, and governmental agencies, and thus represents the collective experience and information on hazard communication gathered by the participants in these sectors over the last several decades. *See* Parts III and XIII of this preamble; 74 FR 50280, 2085–86 (Sept. 30, 2009); 71 FR 53617, 53618–19 (Sept. 12, 2006). Indeed, OSHA noted the possibility of a future

internationally harmonized standard in the preamble accompanying the original HCS rule. *See* 48 FR at 53287 (Nov. 25, 1983).

The last sentence of section 6(b)(7) also requires consultation with the Secretary of Health and Human Services. As detailed in the NPRM, NIOSH was involved in the development of the proposal through briefings and review of the proposed rule before publication. *See* 74 FR at 50306 (Sept. 30, 2009). NIOSH strongly supported the proposal in comments and hearing testimony (Document ID #0412, 0470, 0472, and 0497) and has actively supported the development of the GHS. *See* 74 FR at 50306 (Sept. 30, 2009).

Paul A. Shulte, Ph.D., testified on behalf of NIOSH that:

> [A] significant advantage of the proposed standard is the detailed technically sound criteria for classification that will improve accuracy and consistency in the information provided to employers and employees on chemical hazards and protective measures * * *. In summary, the proposed standard will serve as a powerful tool for the protection of working people.

(Document ID #0497 Tr. 36–37). OSHA has consulted with HHS in accordance with section 6(b)(7). For all the reasons set forth above, revision of the HCS through adoption of the GHS as proposed by OSHA is authorized by section 6(b)(7) of the OSH Act, 29 U.S.C. 655(b)(7).

2. Section 6(b)(5) Authority. OSHA also has authority to adopt the proposal under section 6(b)(5) of the Act, 29 U.S.C. 655(b)(5). As noted above, section 6(b) explicitly allows OSHA to ''modify'' standards, and adoption of the GHS is justified because it ''most adequately assures'' employee protection for purposes of section 6(b)(5) for the reasons detailed in parts IV and XIII of this preamble.

HCS is a 6(b)(5) standard since it acts to mitigate the significant health risk of using dangerous chemicals without adequate hazard communication. *See Int'l Union, UAW* v. *OSHA,* 938 F.2d 1310, 1313 (D.C. Cir. 1991). The Society of the Plastics Industry, Inc. (SPI), however, argues that because the rule also addresses physical hazards, ''the agency must comply with the more demanding burden of proof at least with respect to the safety hazards,'' and that some form of cost-benefit analysis is required (Document ID #0392). OSHA disagrees. Safety standards must be ''highly protective,'' which means OSHA may ''deviate only slightly from the stringency required by section 6(b)(5).'' *Int'l Union, UAW* v. *OSHA,* 37 F.3d 665, 669 (D.C. Cir. 1994). The burden of proof for safety standards is therefore not more demanding than that required for 6(b)(5) standards, as SPI argues. Nor does OSHA believe that the OSH Act requires a cost-benefit analysis in setting safety standards. *See Control of Hazardous Energy Sources, Supplemental Statement of Reasons,* 58 FR 16612, 16621–23 (Mar. 30, 1993). However, as discussed in Section VI, Final Economic Analysis, OSHA has examined the costs and benefits of the final rule, and found that the benefits exceed costs by a large margin. In any event, OSHA believes that the more protective requirements of section 6(b)(5) apply to this standard because the standard addresses health hazards.

Standards adopted under the authority of section 6(b)(5) must be supported by a finding of significant risk. However, as explained elsewhere, the GHS is an improved method of communicating chemical hazards to employers and employees over the current standard, and therefore the final rule, which incorporates the GHS, is now the ''standard that most adequately assures'' worker protection. OSH Act § 6(b)(5); 29 U.S.C. 655(b)(5). Adoption of GHS will substantially reduce the significant risk of inadequate communication workers face. As discussed above, OSHA supported the current rule with a finding, affirmed by the Third Circuit, that ''inadequate communication about serious chemical hazards endangers workers'' and that the HCS will mitigate this risk. 48 FR 53321 (Nov. 25, 1983); *United Steelworkers* v. *Auchter,* 763 F.2d at 735; *See also* 59 FR 6126, 6127, 6129, 6132–38 (Feb. 9, 1994). The record shows that this significant risk of inadequate communication was not eliminated by the current standard.

As discussed in Section IV, several studies show that employees do not understand approximately one-third of the safety and health information listed on SDSs prepared in accordance with the current standard (Document ID #0245, 0263, 0295, 0309, and 0310). Studies also report that roughly 40% of persons reviewing SDSs found them difficult to understand (Document ID #0188 and 0262). The results from these studies probably overstate the level of comprehension in the workforce, because the studies had a selection bias towards employees who have stronger English reading skills. These findings are corroborated by worker testimony stating that they and their coworkers find SDSs ''difficult and confusing,'' ''inadequate and incomprehensible,'' and a ''nightmare.'' One witness stated that employees he works with would not ask to see SDSs because they were too complicated, and as a result, the employees unwittingly expose themselves to chemical hazards (Document ID #0494 Tr. 50, 54–55; and 0499 Tr. 134, 147–48, 151, 162, 165–66, and 167).

Moreover, the evidence in the record shows workers who read SDSs prepared in a standardized format have substantially improved comprehension of the information they present (Document ID #0191, 0263, 0309, and 0310). Indeed, standards specifying uniform formats for SDSs have been adopted by ANSI and other standards bodies, indicating a consensus that standardized SDSs will more effectively communicate chemical hazards to workers and employers. Moreover, commenters overwhelmingly agreed that standardizing SDSs would improve hazard communication. (*See, e.g.,* Document ID #0330, 0335, 0336, 0341, 0344, 0348, 0357, 0370, 0372, 0376, 0381, 0410, 0414, and 0415).

Likewise, the record shows that the current HCS's performance-oriented labeling requirements result in inadequate communication. Research conducted over the last twenty years and summarized in section IV of this preamble shows that use of the signal words ''Danger'' and ''Warning,'' pictograms, red borders, and standardized hazard warnings and precautionary statements better convey information about chemical hazards. Studies show that the information conveyed by these techniques is better understood, especially among low literacy populations, better remembered, and more likely to be acted upon. Again, commenters agreed that the current performance-oriented labeling requirement leads to worker confusion, and that the standardized GHS labeling requirements would minimize that confusion. (*See, e.g.,* Document ID #0313, 0327, 0335, 0336, 0341, 0344, 0348, 0351, 0365, 0370, 0410, 0412, and 0644.)

Finally, employees still continue to suffer chemical-related injuries, illnesses and deaths. As discussed in more detail in Section VI, Final Economic Analysis, of the preamble, OSHA estimates that over 40 million employees are potentially exposed to hazardous chemicals. BLS data show that in 2007, there were approximately 55,400 illnesses related to hazardous chemical exposures and 125 chemical-related fatalities. These statistics probably represent only a small portion of the illnesses experienced by exposed employees; most occupational illnesses are not reported because they are not recognized as being related to workplace exposures and are subject to long

latency periods between exposure and the manifestation of disease. The most recent nationwide study of chronic illness estimated that in 1992, there were between 46,900 to 73,700 fatalities from chronic illnesses related to occupational exposures to chemicals (Document ID #0274). In addition, a 2004 study of chronic occupational illness in California reported that more than 200,000 workers were diagnosed with serious chronic diseases attributable to chemical exposures in the workplace, and that an additional 4,400 workers in California died during that year from chemical exposures in the workplace (Document ID #0269).

These data corroborate the idea that currently there is inadequate communication of chemical hazards in the workplace. Further, they show that the use of chemical hazards in the workplace creates a significant risk to employees. For the reasons explained above and in sections IV and XIII of the preamble, OSHA believes that the final rule will reduce the risk to employees by providing better and more easily understood information to employees and employers about the hazards of the chemicals they use, which in turn will allow precautionary measures to be taken.

In its post-hearing comment, the Styrene Information and Research Council (SIRC) argued that OSHA should also have examined injury and illness rates in the EU. It states that ''the GHS is substantially the system that has been in place in the EU for the last 40 years'' for substances covered by the EU Dangerous Substances Directive and for the 10 years for mixtures covered by the EU Dangerous Preparations Directive (Document ID #0642). OSHA disagrees with SIRC's premise. There are significant differences between the GHS and the relevant EU directives. These differences include the criteria for classifying hazards, as well as the label elements used to communicate the hazardous effects. In addition, even if the EU's hazard communications obligations were substantially similar to the GHS, there are technical hurdles that would have to be overcome before such a study could yield useful information. There are significant differences in the way that statistics for occupational illness and injuries collected by the US and the EU (and its members) that make direct comparisons difficult. Furthermore, the regulatory structure for mitigating the hazards identified and communicated in varying systems also differ significantly, and this would confound any effort to compare illness and injury rates in the two jurisdictions. In any event, OSHA need not wait for scientific certainty to update its regulations, but rather it must rely on the best available evidence, and may use conservative assumptions in interpreting the evidence. OSH Act § 6(b)(5), 29 U.S.C. 655(b)(5); *Benzene,* 448 U.S. at 655–56 & n.62. As discussed above and in Sections IV and XIII, the best available evidence indicates that a significant risk continues to exist under the current standard and that the final rule will improve chemical hazard communications, thereby reducing the risk of injury, illness or death associated with the use of hazardous chemicals in the workplace.

C. Feasibility

OSHA standards must be feasible, which means ''capable of being done, executed or effected.'' *Cotton Dust,* 452 U.S. at 508–09. Feasibility has two aspects, economic and technological. *United Steelworkers of Am.* v. *Marshall,* 647 F.2d 1189, 1264 (D.C. Cir. 1981) (''*Lead I*''). A standard is technologically feasible if the protective measures it requires already exist, can be brought into existence with available technology, or can be created with technology that can reasonably be expected to be developed. *Id.* at 1272. A standard is economically feasible if industry can absorb or pass on the cost of compliance without threatening its longer term profitability or competitive structure. (*See Cotton Dust,* 452 U.S. at 530 n.55; *Lead I,* 647 F.2d at 1265.)

In addressing feasibility in the 1994 HCS revisions, OSHA found that:

> The feasibility question raised by the HCS is not difficult to resolve. This standard does not relate to activities on the frontiers of scientific knowledge; the requirements are not the sorts of obligations that approach the limits of feasibility. *Associated Builders & Contractors,* 862 F.2d at 68. The record on which the original and expanded HCS's were based did not contain credible evidence that the HCS would be technologically or economically infeasible for any industrial sector, *id.,* and there was substantial evidence of feasibility, 52 FR 31855–58.

59 FR at 6133 (Feb. 9, 1994). OSHA has repeatedly found that the requirements of the HCS are technologically feasible. *See* 52 FR at 31855–57 (Aug. 24, 1987); 59 FR at 6133 (Feb. 9, 1994). While the GHS modifications to HCS impose more specific requirements for hazard classification, labeling, and safety data sheets, employers may use the same expertise and methods to meet these requirements as they are already utilizing to comply with the requirements of HCS.

As discussed below and in section VI.E of this preamble, OSHA believes the final rule poses no technological feasibility issues. The most important resource employers will need in order to comply with the GHS modifications to HCS is technical expertise in hazard classification and the communication of those hazards. OSHA found that such expertise was already available in promulgating the initial HCS rule in 1983. 48 FR at 53296–99 (Nov. 25, 1983). OSHA believes that the availability of professionals with this expertise has only increased in the intervening time. The GHS has already been implemented, in whole or in part, by a number of major U.S. trading partners, including Japan and the EU. Companies that export to these jurisdictions should already have developed expertise in the GHS, and there are a number of GHS training resources developed on the international level (Document ID #0405, 0410, and 0514). At least one professional organization currently provides GHS training in hazard communication to professionals and businesses in the United States (Document ID #0021 and 0145). Through OSHA's Alliance with the Society for Chemical Hazard Communication, training to small businesses in the requirements of hazard communication and information about the GHS modifications has been made available. *See http://www.osha.gov/dcsp/alliances/schc/schc.html.* NIOSH is preparing a program for employers to use in training their employees in the new labeling scheme (Document ID #0412). OSHA received numerous comments discussing the professionals and tools (both manual and electronic) that employers have available to comply with current hazard communication requirements. (*See, e.g.,* Document ID #0015, 0024, 0026, 0036, 0038, 0042, 0046, 0050, 0053, 0072, 0077, 0107, 0108, 0116, 0123, 0128, 0141, 0144, 0145, 0154, 0155, 0163, 0330, 0352, and 0389.) The Agency has been engaged on several fronts to facilitate the transition from the current standard to the GHS modifications. For instance, the United Nations Institute for Training and Research is developing basic and more advanced training courses for the GHS, and OSHA has been involved with and committed resources to this effort. As discussed in more detail below in the Summary and Explanation, OSHA plans to issue a number of outreach and compliance assistance materials. Additionally, NIOSH testified that the World Health Organization has started the process to convert International Safety Cards to GHS and as of March 2010; approximately 249 (15%) have

already been converted (Document ID #0497 Tr. 46). OSHA believes that adopting the GHS modifications poses no technological feasibility issues.

Likewise, for the reasons more fully discussed in Section VI, Final Economic Analysis, OSHA believes that the adoption of GHS will not pose economic feasibility issues. Again, OSHA previously found that the implementation of HCS would have no such effect. *See* 52 FR at 31855–57 (Aug. 24, 1987); 59 FR at 6133 (Feb. 9, 1994). As discussed in Section VI, OSHA has found that, once conversion to the new system is completed, compliance with the GHS-modified HCS will not be more expensive than compliance with the current HCS and will result in savings for employers. While industry will incur the cost of converting to the new system, OSHA does not believe that this cost is so substantial as to threaten long term profitability or the competitive structure of any industry.

VI. Final Economic Analysis and Voluntary Regulatory Flexibility Analysis

A. Introduction and Summary

Introduction

OSHA is required by the Occupational Safety and Health (OSH) Act of 1970 to ensure and demonstrate that standards promulgated under the Act are reasonably necessary and appropriate, as well as technologically and economically feasible. Executive Orders 12866 and 13563, the Regulatory Flexibility Act, and the Unfunded Mandates Reform Act also require OSHA to estimate the costs, assess the benefits, and analyze the impacts of certain rules that the Agency promulgates. Executive Orders 12866 and 13563 direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility. OSHA has determined that this action is ''economically significant'' within the meaning of 3(f)(1) of the executive order because it is likely to have an effect on the economy of $100 million or more in any one year. Accordingly, the rule has been reviewed by OMB.

Accordingly, OSHA has prepared this Final Economic Analysis (FEA), including a Final Regulatory Flexibility Screening Analysis (FRFSA), for the modifications to the Hazard Communication Standard (HCS). The OSHA FEA is based largely on research conducted for the Preliminary Economic Analysis (PEA) by Policy, Planning, and Evaluation, Inc. (PP&E), as presented in its revised final report, ''Data and Analysis in Support of an Economic Analysis of Proposed Changes to the OSHA Hazard Communication Standard,'' prepared under contract to OSHA, and on research conducted for purposes of completing this FEA by Eastern Research Group (ERG). ERG and OSHA analyses updated both costs and benefits. The materials prepared by PP&E, 2009 (Document ID #0273) and ERG (2010, 2011, and 2012) [1] are available in the public docket for this rulemaking, OSHA–H022K–2006–0062, through *www.regulations.gov.*

Need for Regulation

Employees in work environments covered by the HCS are exposed to a variety of significant hazards that can and do cause serious injury and death. The HCS serves to ensure that both employers and employees are provided needed information about chemical hazards that was not provided by markets in the absence of such a standard. The HCS also facilitates interstate commerce by promoting consistency among federal and individual state requirements.

The changes to the HCS will create a uniformity standard for the presentation of hazard information and, as such, will serve to improve the efficiency and effectiveness of the existing hazard communication system in the U.S., and to reduce unnecessary barriers to trade. Hazard communication is currently addressed by many different international, national, and State authorities. As described in Section IV of this preamble, these existing requirements are not always consistent and often contain different definitions of hazards and varying provisions for what information is required on labels and safety data sheets. Complying with these different rules results in increased costs for employers with hazardous chemicals in their workplace and for chemical manufacturers, distributors, and transporters involved in international trade. In addition to these effects on businesses, the different existing requirements result in workplaces receiving chemicals with varying information, with potential adverse impacts on the safety and health of employees. The revisions to the OSHA HCS will standardize the hazard communication requirements for products used in U.S. workplaces, and thus provide employees with uniform and consistent hazard communication information. Secondarily, because these revisions will harmonize the U.S. system with international norms, they will facilitate international trade.

Affected Industries

The revisions would affect employers and employees in many different industries across the economy. Based on ERG (2012), OSHA estimates that the HCS covers over five million workplaces in which employees are potentially exposed to hazardous chemicals (*see* Table VI–3).

For establishments with employees whose only exposures to hazardous chemicals result from their use of the chemical products, the revisions to the HCS would generally involve minor effects, such as familiarization with new warning labels. For establishments producing hazardous chemicals, which are generally part of the chemical manufacturing industry, the revisions to the standard would involve reclassifying chemicals in accordance with the new classification system and revising safety data sheets (SDSs) and labels associated with hazardous chemicals. OSHA has judged that SDSs for imported chemicals would normally be produced in the country of origin, and thus would not represent expenses for importers. OSHA solicited comment on this judgment in the PEA and did not receive any contrary testimony or evidence.

Benefits

There is ample evidence of the substantial risks of chemical exposure in the workplace. In 2007, according to the Bureau of Labor Statistics, employees suffered an estimated 55,400 illnesses attributable to chemical exposures (BLS, 2008), and some 17,340 chemical-source injuries and illnesses involved days away from work (BLS, 2009). However, as noted in the preamble to the HCS in 1983, BLS

[1] Eastern Research Group (ERG, 2010). Harmonization of Hazard Communication: Labeling Costs. Final Report. Submitted to Occupational Safety And Health Administration, Directorate of Evaluation and Analysis, Office of Regulatory Analysis, Contract No. GS–10–F–0125P. April 28, 2010. Eastern Research Group (ERG, 2011). Harmonization of Hazard Communication: Summary of Labeling Costs. Final Report. Submitted to Occupational Safety And Health Administration, Directorate of Evaluation and Analysis, Office of Regulatory Analysis, Contract No. GS–10–F–0125P. March 23, 2011.

Eastern Research Group (ERG, 2012). Excel Spreadsheets in Support of OSHA Final Economic Analysis for GHS Rule. Submitted to Occupational Safety And Health Administration, Directorate of Evaluation and Analysis, Office of Regulatory Analysis, Contract No. GS–10–F–0125P. January 20, 2012.

estimates probably only reflect a small percentage of occupational illnesses (48 FR 53284, Nov. 25, 1983) because most occupational illnesses are not reported. The principal reasons are that they are not recognized as being related to workplace exposures and are subject to long latency periods between exposure and the manifestation of disease. The key study of the issue of the number of fatalities from chronic illnesses, not recorded in any way by BLS, is Leigh *et al.,* 1997 (Document ID#0274). That study found that in 1992, there were from 46,900 to 73,700 fatalities from chronic illnesses related to occupational exposures to chemicals. This critical category dwarfs all acute injuries and illnesses due to chemicals recorded by BLS.[2]

Section IV of this preamble describes some of the incidents that may have been related to the non-standardized approach to SDSs in the current HCS, including xylene exposure at a hospital when an employee was unable to find critical information on an SDS in an emergency spill situation (Document ID #0251). As a result, twelve employees required emergency room treatment. Were the information on SDSs more uniformly formatted and comprehensible, as required under the modifications to HCS, incidents such as this would be less likely to occur.

In general, the modifications to the HCS are expected to result in increased safety and health for the affected employees and to reduce the numbers of accidents, fatalities, injuries, and illnesses associated with exposures to hazardous chemicals.

It is difficult to quantify precisely how many injuries, illnesses, and fatalities would be prevented due to the revisions to the HCS.[3] The benefits associated with the current HCS may indirectly help provide a general sense of the potential magnitude of the benefits of the revisions to the HCS. OSHA estimates that if the rule could capture one percent of the benefits estimated for the original 1983 and 1987 HCS rules, the revisions would result in the prevention of 318 non-lost-workday injuries and illnesses, 203 lost-workday injuries and illnesses, 64 chronic illnesses, and 43 fatalities annually. The monetized value of the corresponding reduction in occupational risks among the affected employees is an estimated $250 million on an annualized basis.

The harmonization of hazard classifications, safety data sheet formats, and warning labels for affected chemicals and products would also yield substantial savings to businesses. Fewer different SDSs would have to be produced for affected chemicals, and many SDSs would be able to be produced at lower cost due to harmonization and standardization. The benefits represented by these cost reductions would primarily affect businesses involved in chemical manufacturing. In addition, businesses that purchase or use hazardous chemicals can expect reductions in operating costs as a result of the promulgation and implementation of the modifications to the HCS due the standardization of SDSs, which will make it easier to locate information and determine handling requirements, and other factors related to simplification and uniformity which will improve workplace efficiency.

In 2008, in preparation for OSHA's Notice of Proposed Rulemaking, PP&E conducted extensive research on the processes that companies use to classify chemical hazards, to develop SDSs and labels, and to handle, store, and use hazardous chemicals. PP&E evaluated how these processes would be affected by the revisions to the HCS and analyzed the potential savings that would be realized as a result of adopting these revisions. Using the parameters estimated by PP&E through its research and employing updated data on wages and the number of affected establishments and employees, OSHA has concluded that the annual cost savings for these companies would be an estimated $507.4 million.

OSHA also expects the revised HCS will reduce the costs of providing hazard communication training to employees in future periods. Stakeholders largely corroborated that expectation. Standardized SDS and label formats will reduce the amount of time needed to familiarize employees with the HCS, which will reduce the training time for all employees once the final rule is fully implemented. OSHA did not monetize these estimated cost savings, but anticipates that they will be substantial.

As an additional benefit, the modification of the HCS by the inclusion of the globally harmonized system (GHS) of classification and labeling of chemicals would be expected to facilitate international trade, increasing competition, increasing export opportunities for U.S. businesses, reducing costs for imported products, and generally expanding the selection of chemicals and products available to U.S. businesses and consumers. As a result of both the direct savings resulting from harmonization and the increased competitiveness, prices for the affected chemicals and products, and the corresponding goods and services using them, would be lowered.

Finally, the GHS modifications to the OSHA HCS would meet the international goals for adoption and implementation of the GHS that have been supported by the U.S. government. Implementing GHS in U.S. federal laws and policies through appropriate legislative and regulatory action was anticipated by the U.S. support of international mandates regarding the GHS in the Intergovernmental Forum on Chemical Safety, the World Summit on Sustainable Development, and the United Nations. It is also consistent with the established goals of the Strategic Approach to International Chemicals Management, a policy framework that the U.S. helped to craft (*See http://www.chem.unep.ch/saicm/*).

Compliance Costs

The estimated compliance costs for the revisions to the HCS represent the additional costs necessary for employers to achieve full compliance. They do not include costs associated with current compliance that has already been achieved; nor do they include costs necessary to achieve compliance with existing requirements, to the extent that some employers may currently not be fully complying with applicable regulatory requirements.

The majority of the costs associated with compliance with the revisions to the HCS would generally be incurred by the affected industries as one-time transitional costs over the phase-in period of four years including the costs to reclassify chemical hazards and revise SDSs and labels, to train workers, and for management to familiarize itself with the requirements of the final rule. There will be additional ongoing annual compliance costs associated with the revisions to the HCS due to the cost to purchase and maintain color printing ink or cartridges or to purchase pre-printed color labels in order to comply

[2] A more recent study prepared by the University of California Centers for Occupational and Environmental Health, and commissioned by the California Environmental Protection Agency, suggests that fatalities from chronic illnesses remain an important problem (University of California COEH, 2008 p. 18). That study estimated that, in 2004, more than 200,000 workers, in California alone, were diagnosed with serious chronic diseases (encompassing cancer, COPD, asthma, pneumoconiosis, chronic renal failure, and Parkinson's disease) attributable to chemical exposures in the workplace, and that an additional 4,400 workers in California died during that year from chemical exposures in the workplace.

[3] While comments in the record did not attempt to estimate the magnitude of these safety and health benefits, they largely supported the conclusion that these revisions would yield increased protection for workers. For additional discussion of the comments regarding OSHA's estimate of benefits, see Section VI:D Benefits in this preamble.

with the requirement that the GHS hazard warning pictogram be presented with a red border. However, OSHA's analysis has found that these costs will not be substantial relative to the other costs of the rule.

The compliance costs are expressed as an annualized cost for purposes of assessing the cost-effectiveness of the revisions, in order to be able to compare the economic impact of the rulemaking with other regulatory actions, and to be able to add and track federal regulatory compliance costs and economic impacts in a consistent manner. Annualized costs also represent a better measure for assessing the longer-term potential impacts of the rulemaking. A seven percent discount rate was applied to costs incurred in future years to calculate the present value of these costs for the base year in which the standard becomes effective, and the same discount rate was then applied to the total present value costs, over a 20-year period,[4] to calculate the annualized cost.

The total annualized cost of compliance with the final rule is estimated to be about $201 million. The major cost elements associated with the revisions to the standard include the classification of chemical hazards in accordance with the GHS criteria and the corresponding revision of safety data sheets and labels to meet new format and content requirements ($22.5 million); training for employees to become familiar with new warning symbols and the revised safety data sheet format ($95.4 million); management familiarization and other management-related costs as may be necessary ($59.0 million); and costs to purchase upgraded label printing equipment and supplies or to purchase pre-printed color labels in order to include the hazard warning pictogram enclosed in a red-bordered diamond on the product label ($24.1 million).

Net Benefits, Cost-Effectiveness, and Regulatory Alternatives

Table VI–1 provides a summary of the costs and benefits of the modifications to the OSHA HCS, and it shows the net benefits of the modifications to the standard are estimated to be $556 million annually, using a discount rate of 7 percent to annualize costs and benefits. (Using a 3 percent discount rate instead would have the effect of lowering the costs to $161 million per year and increasing the gross benefits to $839 million per year. The result would be to increase net benefits from $556 million to $674 million per year.) Because compliance with the standard would result in cost savings that exceed costs, OSHA has not provided estimates of costs per life saved or other metrics of cost-effectiveness. However, it should be noted that the estimated benefits exceed costs by more than a factor of three.

In response to comments on the proposed rule, OSHA has made the following changes to the economic analysis from the PEA to the FEA:

(1) Increased by 100 percent the amount of training time necessary to train employees on the revised HCS during the transition period—from 30 minutes to 60 minutes;

(2) Increased by over 60 percent the number of SDSs (with corresponding labels) covered by the rule—from approximately 0.9 million to over 1.4 million;

(3) Added annualized costs of $24.1 million to print product labels in color; and

(4) Incorporated updated economic data on the number of establishments, number of employees, annual revenues, annual profits, etc. and adjusted estimates from 2007 dollars to 2010 dollars.

The change from 2007 to 2010 dollars using the GDP deflator (for non-wage-related costs and benefits) increased affected costs and benefits by about 4 percent. The rule changes that increased the phase-in period reduced the annualization factors and the associated costs and benefits by about 9.6 percent. All other changes to costs and benefits were the result of updated economic data, including wages, and revised cost factors (e.g., number of SDSs, number of affected employees) in response to comments on the proposed rule.

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[4] OSHA annualized costs for this rule over a 20-year period in accordance with Executive Order 13563, which directs agencies ''to use the best available techniques to quantify anticipated present and future benefits and costs as accurately as possible.'' In addition, OMB Circular A–4 states that analysis should include all future costs and benefits using a ''rule of reason'' to consider for how long it can reasonably predict the future and should limit its analysis to this time period. The choice of a 20-year period is designed to capture out-year benefits given a 4-year phase-in period. A shorter period would place too much emphasis on the phase-in period, where benefits would not be accruing. A longer discount period might over-emphasize the long-term benefits since net benefits increase with the length of the annualization period. As a comparison, the life of OSHA's original hazard communication rule was 1987 to 2011, a 24-year period, suggesting that 20 years is a reasonable estimate.

Table VI-1: Net Benefits

The point estimates below do not reflect the uncertainties described throughout the analysis. While OSHA is reluctant to provide quantified ranges, OSHA recognizes that these estimates are uncertain. OSHA provides a Sensitivity Analysis on these estimates in the final section of the FEA.

Annualized Costs	
Reclassification of Chemical Hazards and Revision of SDSs and Labels	$22.5 million
Employee Training	$95.4 million
Management Familiarization and Other Costs	$59.0 million
Additional Label Printing Costs	$24.1 million
Total Annualized Costs:	$201 million
Annual Benefits	
Number of Non-lost-workday Injuries and Illnesses Prevented	318 (159 - 1,590)
Number of Lost Workday Injuries and Illnesses Prevented	203 (101 - 1,015)
Number of Chronic Injuries Prevented	64 (32 - 302)
Number of Fatalities Prevented	43 (22 - 215)
Monetized Benefits of Reduction in Safety and Health Risks	$250 ($125 - $1,250) million
Savings from Productivity Improvements for Health and Safety Managers and Logistics Personnel	$475.2 million
Savings during Periodic Updating of SDSs and Labels	$32.2 million
Savings from Simplified Hazard Communication Training	unquantified
Reductions in non-tariff trade barriers	unquantified
OSHA standards that are consistent with international standards, consensus standards, and standards of other federal regulatory agencies	unquantified
Contribution towards achieving international goals supported by the U.S. government	unquantified
Total Annual Monetized Benefits:	$757 ($632 - $1,757) million
Net Annual Monetized Benefits (Benefits Minus Costs):	$556 ($431-1,556) million

Note: Costs and benefits are expressed in 2010 dollars and are discounted at a 7% discount rate.

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As discussed in Section III of this preamble, the available alternatives to the final rule are somewhat limited since this final rule modifies the current HCS in order to align with the provisions of the UN's GHS. In Section III, the Agency qualitatively discussed the two major alternatives presented during this rulemaking process—(1) voluntary adoption of GHS within the existing HCS framework and (2) a limited adoption of specific GHS components and a variation on (1) that would require compliance with GHS but allow an exemption for small businesses to comply with either the current HCS or with the GHS-compliant HCS. All of these alternatives were soundly rejected by stakeholders. To allow certain parties to follow an alternative system or to allow voluntary adoption of the elements of a uniformity standard does nothing to reduce confusion, improve efficiency, or simplify processes. In order for those benefits to be realized, all elements must apply to all affected parties. OSHA has determined that both of the alternatives presented above would eliminate significant portions of the benefits of the rule.

OSHA did not attempt to evaluate the costs and benefits for the regulatory alternatives that involved partial or voluntary adoption of the GHS. The Agency did evaluate two alternatives where the effective dates were altered. In the first alternative considered, all elements of the revised HCS would be required to be implemented within two years. Under this alternative, all transitional costs would be incurred in two years and benefits would be realized beginning in the third year. The second alternative that OSHA evaluated extended the timeline for training to be completed. For this alternative, all elements of the revised HCS (including training) would be required to be implemented by June 1, 2016. Under this alternative, training costs would not be realized for four and a half years (as opposed to the two year requirement for training in the final version of this rule) while benefits would not be realized for five years (unchanged from the final rule). The results of these evaluations are presented in Table VI–2 below and are discussed in further detail, *including significant qualifications,* in Section VI:G Net Benefits, Cost Effectiveness, and Regulatory Alternatives in this preamble. Although both alternatives show greater net benefits, the Agency concludes that the timing of the final rule is preferable because of additional (but unquantified) compliance costs and reduced (but unquantified) benefits under the first alternative and because of reduced (but unquantified) worker health and safety benefits under the second alternative. In addition, OSHA expects that the final rule offers coordination benefits in that its requirements will fully take effect at the same time as the EU completes its transition.

Table VI-2
Regulatory Alternatives

	Years After Promulgation								
	To Complete Training	For Full Implementation	Until Benefits are Realized	Annualized Benefits	Annualized Costs	Annualized Net Benefits	Benefits Relative to Final Rule Implementation Timeline	Costs Relative to Final Rule Implementation Timeline	Net Benefits Relative to Final Rule Implementation Timeline
Alternative 1									
	2 years	2 years	3 years	$923 million	$206 million	$717 million	+ $166 million	+ $5 million	+ $161 million
Final Rule Implementation Timeline									
	2 years	4.5 years	5 years	$757 million	$201 million	$556 million	--	--	--
Alternative 2									
	4.5 years	4.5 years	5 years	$756 million	$189 million	$568 million	--	-$12 million	+ $12 million

Source: Office of Regulatory Analysis, OSHA

Economic Impacts

To assess the nature and magnitude of the economic impacts associated with compliance with the final rule, OSHA developed quantitative estimates of the potential economic impact of the new requirements on entities in each of the affected industry sectors. The estimated compliance costs were compared with industry revenues and profits to provide an assessment of the economic feasibility of complying with the final rule and an evaluation of the potential economic impacts.

Only the compliance costs were considered for purposes of assessing the potential economic impacts and economic feasibility of the revisions. As described in Section VI.G: Net Benefits, Cost-effectiveness, and Regulatory Alternatives, in this preamble, the overall economic impacts associated with this rulemaking are expected to result in significant net benefits to employers, employees, and the economy generally.

As described in greater detail in Section VI.F: Costs of Compliance in this preamble, the costs of compliance with the rulemaking are not large in relation to the corresponding annual financial flows associated with each of the affected industry sectors. The estimated costs of compliance represent about 0.001 percent of revenues and about 0.011 percent of profits, on average, across all entities; compliance costs represent less than 0.09 percent of revenues or, with the exception of three chemical manufacturing industries, less than 0.9 percent of profits in any individual industry sector. These three chemical manufacturing industries are NAICS 325181 Alkalies & chlorine manufacturing, NAICS 325191 Gum & wood chemical manufacturing, and NAICS 325992 Photographic film, paper, plate, & chemical manufacturing, and their compliance costs as a percentage of profits are 4.3 percent, 2.1 percent, and 2.4 percent, respectively. The higher percentage of profits for these three industries are mainly the result of low profit margins, low baseline estimates of the number of color printers currently employed in these industries (causing higher costs of compliance with the color printing requirements), and a large estimated number of labels produced by these industries.

The economic impact of achieving compliance with the final rule, without considering the associated benefits, is most likely to consist of an extremely small increase in prices of about 0.001 percent, on average, for affected hazardous chemicals. It is highly unlikely that a price increase of this magnitude would significantly alter the types or amounts of goods and services demanded by the public or any other affected customers or intermediaries. If the compliance costs of the final rule can be substantially recouped with a minimal increase in prices, there may be little or no effect on profits.

In general, for most establishments, it would be very unlikely that none of the compliance costs could be passed along in the form of increased prices. In the event that a price increase of 0.001 percent were not possible, profits in the affected industries would be reduced by an average of about 0.011 percent.

Given the minimal potential impact on prices or profits in the affected industries, OSHA has concluded that compliance with the requirements of the rulemaking would be economically feasible in every affected industry sector.

In addition, based on an analysis of the costs and economic impacts associated with this rulemaking, OSHA concludes that the effect of the final rule on employment, wages, and economic growth for the United States would be negligible. The effect on international trade is likely to be beneficial and similar to the effect of a small reduction in non-tariff trade barriers.

Final Regulatory Flexibility Screening Analysis

OSHA has analyzed the potential impact of the final rule on small entities, and has prepared a Final Regulatory Flexibility Screening Analysis (FRFSA) in conjunction with this rulemaking to describe the potential effects on small entities. The FRFSA is included as a part of this preamble in Section VI:I.

As a result of the analysis of the potential impact on small entities, OSHA concludes and certifies that the rulemaking would not have a significant impact on a substantial number of small entities. Therefore, a Final Regulatory Flexibility Analysis (FRFA) is not required for this rulemaking. Nevertheless, OSHA has voluntarily provided the elements of the FRFA as part of the FRFSA presented in Section VI:I: Final Regulatory Flexibility Screening Analysis in this preamble. As part of this rulemaking, OSHA has fulfilled its requirements under the Regulatory Flexibility Act and under the Small Business Regulatory Enforcement Fairness Act, as applicable, to ensure that no unnecessary burdens are imposed on small businesses.

The remainder of this FEA includes the following sections:

B. Need for Regulation
C. Profile of Affected Industries
D. Benefits
E. Technological Feasibility
F. Costs of Compliance
G. Net Benefits, Cost-Effectiveness, and Regulatory Alternatives
H. Economic Feasibility and Impacts
I. Final Regulatory Flexibility Screening Analysis
J. Environmental Impacts
K. Unfunded Mandates Reform Act Analysis
L. Sensitivity Analysis

B. Market Failure and the Need for Regulation

Employees in work environments addressed by OSHA's hazard communication standard (HCS) are exposed to a variety of significant hazards associated with chemicals used in the workplace that can and do cause serious injury and death. OSHA's HCS was designed to ensure that employers and employees are provided the information they need about the hazards in chemical products both to make informed purchases and to provide for safe use. The current HCS contains a set of requirements for chemical products, including mandatory hazard determination, labeling, and detailed information (in safety data sheets). Based on evidence presented in the record,[5] OSHA determined that the revisions to the HCS will make employers' hazard communication programs more worker-protective, efficient, and effective. In addition, the revisions will have the effect of harmonizing hazard communication to facilitate international trade by replacing a plethora of national rules with a single international system.

The standard, through conformance with GHS (as explained in Section IV and XIII of this preamble), contains a number of changes to improve the performance of the U.S. hazard communication system:

- Revised criteria for more consistent classification of chemical hazards;
- Standardized signal words, pictograms, hazard statements, and precautionary statements on labels; and
- A standardized format for SDSs.

In short, GHS is a ''uniformity standard'' for the presentation of hazard information (Hemenway, 1975, Document ID #0293, Tr. 8). And much

[5] *See* Document ID #0303, 0313, 0322, 0324, 0327, 0328, 0329, 0330, 0331, 0334, 0335, 0336, 0339, 0340, 0341, 0344, 0345, 0346, 0347, 0349, 0350, 0351, 0352, 0353, 0354, 0356, 0357, 0359, 0363, 0365, 0367, 0369, 0370, 0371, 0372, 0374, 0375, 0376, 0377, 0378, 0379, 0381, 0382, 0383, 0385, 0386, 0387, 0388, 0389, 0390, 0392, 0393, 0396, 0397, 0399, 0400, 0402, 0403, 0404, 0405, 0407, 0408, 0409, 0410, 0411, 0412, 0414, 0417, 0453, 0456, 0461, and 0463 and additional discussion in Section III of this preamble.

like other uniformity standards, such as driving on the right side of the road (in the U.S.), screw threads for fire hose connectors, ''handshake'' protocols for communication between computers, and, for that matter, language, GHS will provide significant efficiencies and economies.[6] In the case of GHS, manufacturers will be able to produce SDSs at lower cost, and users of SDSs will be able to more fully and quickly utilize the information contained in the SDSs, thereby reducing costs and, more importantly, better protect workers against chemical hazards.[7]

Since publication of the current HCS, there has been some movement by industry toward standardization, consistent with the revisions. However, OSHA does not believe that full and comprehensive standardization as required under the revisions, or the goal of harmonizing the U.S. system with the international one, can be achieved voluntarily in the absence of regulation.

First, in a basic sense, GHS cannot simply be implemented by the market. Some aspects of GHS, such as the reorganization of SDSs, would be allowed under the current OSHA standard, but other aspects, such as the classifications system, would not be. Use of differing classification criteria would lead to label warnings that are not consistent with current HCS requirements in some situations. Thus, at a minimum, OSHA would need to modify HCS to allow the use of GHS in the U.S. OSHA cannot simply provide a compliance interpretation that labels and safety data sheets prepared in accordance with the GHS meet the HCS requirements because the requirements of a standard cannot be changed through a compliance interpretation. While there is considerable overlap between the HCS and the GHS in terms of coverage, there are differences in the criteria used to classify both substances and mixtures that can result in different hazards being covered in some situations. This is particularly true in the area of acute toxicity, where OSHA is covering more substances under the modified rule than the current HCS, but potentially fewer mixtures.[8]

Second, it is important to understand that while the costs of creating SDSs and labels under GHS are borne directly by the chemical producers, the bulk of the benefits of adopting GHS accrue to the users. The set of all users includes employers who are direct customers of a chemical manufacturer, employees who use or are exposed to workplace chemicals, and emergency responders who typically have no market relationship with the producers of the chemical. Even if one thought that market forces might ensure the socially optimal approach to SDSs between manufacturers of chemicals and their customers, there are limited market forces at work between the chemical manufacturer and these two other sets of users—the employees and the emergency response community. Therefore, the benefits achieved by a uniformity standard, such as GHS, cannot be obtained in the private market, without regulation.

OSHA does anticipate that there will be some increased market pressure to comply with GHS that will affect some firms that may think that they have no need to switch to the GHS system because they do not ship their products internationally. Many small firms do not realize the extent to which they are involved in international trade. There are probably few companies who have products that are never involved in international trade, or who never import chemical products and need hazard communication information for them. Many chemical producers ship their products to distributors and are unaware of where their products are ultimately used. OSHA can envision a likely scenario in which these distributors put pressure on their suppliers to become GHS-compliant. Further, small companies sell products to larger companies. The larger companies may use those products to prepare goods that are exported. These larger companies might also be expected to pressure their small-firm suppliers to be GHS-compliant. Nevertheless, such an approach would surely involve a long transition period, with attendant losses in worker protection and production efficiencies, and it is doubtful that market pressure alone would achieve full compliance.

The changes made by GHS will involve costs for all parties. Producers of chemicals will incur substantial costs, but will also achieve benefits—in part because they themselves benefit as both producers and users, and in part, as a result of foreign trade benefits that OSHA has not quantified. Some producers may not see these types of trade benefits unless they engage in chemical export. However, many small companies are currently prevented from engaging in international trade because of the substantial burdens of complying with many different countries' requirements. International harmonization of hazard communication requirements would enable these small companies to become involved in international trade if they so desire.

Of more significance to the concerns of the OSH Act, the changes also provide substantial benefits to users, including:

- Fewer worker illnesses, injuries, fatalities, and accidents due to a more consistent and comprehensible system that does not require English literacy to obtain some minimal hazard information;
- Greater ease of use of SDSs; and
- Less time needed to train workers due to a clearer and more uniform system.

Because many of these benefits require uniformity, and the benefits are dispersed throughout a network of producers and users, only some of which have direct market relationships with each other, OSHA believes that only a single, uniform standard can achieve the full net benefits available to a hazard communications system.

C. Profile of Affected Industries

The revisions to the HCS would affect establishments in a variety of different industries in which employees are exposed to hazardous chemicals or in which hazardous chemicals are produced. Every workplace in OSHA's jurisdiction in which employees are exposed to hazardous chemicals is covered by the HCS and is required to have a hazard communication program.

The revisions to the HCS are not anticipated to either increase or

[6] In contrast to a uniformity standard, a specification standard, such as an engineering standard, would spell out, in detail, the equipment or technology that must be used to achieve compliance. The usual rationale for a specification standard is that compliance would be difficult to verify under a performance standard; hence, only a specification standard would guarantee that employees are protected against the risk in question. A specification standard would generally not provide the efficiencies or economies (such as easier, less expensive training on uniform pictograms and a uniform SDS format made possible by this rule) to the regulated community that a uniformity standard would. On the contrary, a specification standard could impose additional costs on some firms that may be able to effectively protect workers using a cheaper alternative approach if such flexibility were permitted.

It is also worth noting that, for uniformity standards with technological implications, the benefits of reduced information costs, economies of uniformity, and facilitation of exchange may need to be weighed against possible losses of flexibility, experimentation, and innovation. However, because GHS is limited to the presentation of hazard information and does not involve other than incidental technological or strategic considerations, the possible costs of uniformity here would be non-existent or minuscule.

[7] On the ability of individuals to more fully and effectively utilize knowledge when uniformity requirements are present, see Hemenway, 1975 (Document ID #0293), pp. 34–35.

[8] The coverage of fewer mixtures is due to the bridging principles and formula being applied to the mixtures' classification, rather than being based strictly on a 1 percent cut-off.

decrease the scope of affected industries or establishments. The revisions define and revise specific classifications and categories of hazards, but the scope of the requirements under which a chemical, whether a substance or mixture of substances, becomes subject to the requirements of the standard is not substantially different from the previous version of HCS. Therefore, the revisions should have little or no effect on whether an entire establishment falls within the scope of the standard. OSHA solicited comment on this determination and received no comment in the record presenting contrary evidence.

For establishments with employees exposed to hazardous chemicals, the revisions to the HCS will generally involve management becoming familiar with and employees receiving training on the new warning labels and the new format of the SDSs. For establishments producing or importing hazardous chemicals, generally as part of the chemical manufacturing industry, these revisions to the standard will involve reclassifying chemicals in accordance with the new classification system and revising safety data sheets and labels associated with hazardous chemicals.

OSHA's estimates of the number of employees covered by the standard are based on the determination that all production employees in manufacturing will be covered, and that, in addition, employees in other industries working in any of the occupations specified in the PP&E (2009) report would also be exposed to hazardous chemicals.

Table VI–3 provides an overview of the industries and estimated numbers of employees potentially affected by the HCS. The data in this table update the estimates provided in the PEA in support of the proposed rule. They rely on the most recent data from the U.S. Census Bureau (2007a, 2007b).[9]

[9] U.S. Census Bureau (2007a). County Business Patterns, 2007. U.S. Department of Commerce. Available at: *http://www.census.gov/econ/cbp/*. U.S. Census Bureau (2007b). 2007 Economic Census. U.S. Department of Commerce. Available at: *http://www.census.gov/econ/census07/*.

The industries and establishments affected by the revisions can be divided into two categories. The first category contains establishments that are required to produce labels and SDSs; the second category contains establishments that do not produce labels or SDSs but are required to provide employee access to labels and SDSs, supplied by others, for the chemicals to which their employees may be exposed in the workplace. As noted in the introduction to this FEA, OSHA has judged that SDSs and labels for imported chemicals would normally be produced in the country of origin, and thus would not represent expenses for importers or other US firms.

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Table VI-3.
Industry Profile

NAICS Code	Industry	Total Number of Firms	Number of Affected Firms	Total Number of Establishments	Number of Affected Establishments	Total Employees	Employees to be Trained	Number of SDSs Produced
11	**Agriculture, Forestry, Fishing & Hunting**							
113	Forestry & Logging	10,303	10,303	10,491	10,491	64,445	17,638	0
114	Fishing, Hunting and Trappinig	2,380	856	2,389	862	9,244	1,637	0
115	Support Activities for Ag & Forestry	10,271	4,412	10,765	4,895	100,513	12,278	0
211	**Oil and Gas Extraction**							
211111	Crude petroleum & natural gas extraction	6,424	6,424	7,221	7,221	133,286	82,953	56,995
211112	Natural gas liquid extraction	139	130	321	311	8,218	6,919	6,145
212	Mining (except Oil & Gas)	4,465	4,465	7,008	7,008	218,044	174,991	0
213	Support Activities for Mining	9,809	9,809	11,652	11,652	341,034	252,262	0
22	**Utilities**							
2211	Electric Power Gen, Trans & Distrib	1,687	1,687	9,611	9,611	503,134	315,623	0
2212	Natural Gas Distribution	507	507	2,283	2,283	79,354	34,240	0
2213	Water, Sewage, & Other Systems	3,998	3,998	4,780	4,780	40,269	21,875	0
23	**Construction**							
236	Construction of Buildings	242,322	242,322	244,862	244,862	1,672,254	1,148,424	0
237	Heavy Construction	49,228	49,228	51,421	51,421	1,016,407	617,651	0
238	Special Trade Contractors	508,722	508,722	515,169	515,169	4,579,222	3,610,532	0
31	**Manufacturing**							
311	Food Manufacturing	21,591	21,591	25,796	25,796	1,439,266	1,116,334	0
312	Beverage &Tobacco Prod. Manuf.	3,466	3,466	4,069	4,069	156,114	90,970	0
313	Textile Mills	2,690	2,690	3,092	3,092	164,082	138,640	0
314	Textile Product Mills	6,471	6,471	6,732	6,732	152,978	124,024	0
315	Apparel Manufacturing	10,151	10,151	10,368	10,368	350,439	275,995	0
316	Leather & Allied Product Manufac.	1,348	1,348	1,392	1,392	36,671	29,133	0
321	Wood Product Manufacturing	14,608	14,608	16,622	16,622	527,565	429,838	0
322	Paper Manufacturing	3,259	3,259	5,037	5,037	425,096	329,797	0
323	Printing and Related Support	31,655	31,655	33,281	33,281	631,771	461,828	0
324	**Petroleum & Coal Prod. Manufac.**							
324110	Petroleum refineries	258	258	374	374	64,263	39,080	26,740
324121	Asphalt paving mixture & block mfg	481	481	1,386	1,386	14,457	10,739	132,545

Table VI-3.
Industry Profile (continued)

NAICS Code	Industry	Total Number of Firms	Number of Affected Firms	Total Number of Establishments	Number of Affected Establishments	Total Employees	Employees to be Trained	Number of SDSs Produced
324	**Petroleum & Coal Prod. Manufac.**							
324122	Asphalt shingle & coating materials mfg	126	126	229	229	11,598	8,503	18,415
324191	Petroleum lubricating oil & grease m	290	290	329	329	10,136	5,426	559,300
324199	All other petroleum & coal products mfg	72	72	90	90	3,123	2,370	5,030
325	**Chemical Manufacturing**							
325110	Petrochemical mfg	41	39	58	55	8,393	4,123	4,498
325120	Industrial gas mfg	89	60	553	60	304	192	4,877
325131	Inorganic dye & pigment mfg	71	59	92	65	2,649	1,713	833
325132	Synthetic organic dye & pigment mfg	90	90	107	107	5,128	2,867	2,308
325181	Alkalies & chlorine mfg	33	33	49	49	4,483	2,748	374
325182	Carbon black mfg	10	10	30	30	1,708	121	222
325188	All other basic inorganic chemical mfg	383	383	612	612	42,063	25,891	16,038
325191	Gum & wood chemical mfg	43	43	51	51	2,139	1,128	2,505
325192	Cyclic crude & intermediate mfg	26	26	31	31	5,074	2,979	356
325193	Ethyl alcohol mfg	222	222	245	245	5,957	4,334	2,545
325199	All other basic organic chemical mfg	541	541	712	712	68,867	39,150	25,119
325211	Plastics material & resin mfg	561	561	799	799	61,199	38,855	84,337
325212	Synthetic rubber mfg	127	127	150	150	8,455	6,053	1,801
325221	Cellulosic organic fiber mfg	16	16	17	17	2,365	1,876	21
325222	Noncellulosic organic fiber mfg	85	85	110	110	24,214	13,956	0
325311	Nitrogenous fertilizer mfg	132	132	157	157	1,117	772	202
325312	Phosphatic fertilizer mfg	30	30	41	41	688	483	65
325314	Fertilizer (mixing only) mfg	341	341	467	467	8,551	5,313	3,871
325320	Pesticide & other agricultural chemical mfg	185	185	241	241	10,668	5,868	5,758
325411	Medicinal & botanical mfg	342	342	366	366	27,475	13,584	3,610
325412	Pharmaceutical preparation mfg	798	798	1,002	1,002	158,124	68,144	12,765
325413	In-vitro diagnostic substance mfg	199	199	244	244	27,215	10,254	26,620
325414	Biological product (except diagnostic) mfg	221	221	314	314	28,525	13,544	3,236
325510	Paint & coating mfg	1,081	1,081	1,318	1,318	41,177	17,728	83,050
325520	Adhesive mfg	446	446	588	588	21,316	13,117	27,450

Table VI-3.
Industry Profile (continued)

NAICS Code	Industry	Total Number of Firms	Number of Affected Firms	Total Number of Establishments	Number of Affected Establishments	Total Employees	Employees to be Trained	Number of SDSs Produced
325	**Chemical Manufacturing**							
325611	Soap & other detergent mfg	649	649	710	710	23,660	14,519	15,825
325612	Polish & other sanitation good mfg	507	507	551	551	16,670	9,207	11,014
325613	Surface active agent mfg	130	130	154	154	6,135	2,706	5,795
325620	Toilet preparation mfg	767	767	826	826	57,957	37,288	17,586
325910	Printing ink mfg	250	250	482	482	12,821	6,224	48,172
325920	Explosives mfg	50	50	77	77	5,431	4,236	2,204
325991	Custom compounding of purchased resin	477	477	588	588	21,942	13,686	5,169
325992	Photographic film, paper, plate, & chemical mfg	384	368	407	407	7,319	4,177	2,667
325998	All other miscellaneous chemical product & preparation mfg	1,091	1,091	1,246	1,246	35,765	20,617	48,145
326	Plastics and Rubber Products Man.	11,187	11,187	14,233	14,233	855,483	667,348	36,591
327	Nonmetallic Mineral Prod. Manufac.	11,351	11,351	17,472	17,472	472,128	370,139	45,544
331	Primary Metal Manufacturing	4,304	4,304	5,267	5,267	438,921	344,209	13,396
332	Fabricated Metal Prod. Manufac.	55,545	55,545	59,637	59,637	1,565,866	1,163,554	0
333	Machinery Manufacturing	23,736	23,736	26,198	26,198	1,137,540	701,517	0
334	Computer & Electronic Prod Man.	12,689	12,689	14,478	14,478	1,043,288	463,175	0
335	Electric Equipment, Appliance Man.	5,291	5,291	6,144	6,144	406,259	292,852	0
336	Transportation Equip. Manufacturing	10,708	10,708	12,857	12,857	1,574,147	1,127,395	0
337	Furniture & Related Product Man.	20,952	20,952	21,717	21,717	517,401	408,165	0
339	Miscellaneous Manufacturing	29,816	29,816	31,160	31,160	680,848	430,024	44,897
42	**Wholesale Trade**							
423	Durable Goods	178,898	178,898	247,339	247,339	3,395,277	956,215	0
424	Nondurable Goods	102,988	102,988	130,640	130,640	2,228,049	835,103	0
42469	Other Chemicals & AlliedProducts	6,169	6,169	9,647	9,647	103,928	38,954	0
4247	Petroleum & petroleum Products	4,890	4,890	7,024	7,024	94,845	35,549	0
42495	Paint, Varnish, & Supplies	1,207	1,207	2,183	2,183	19,875	7,449	0
44-45	**Retail Trade**							
441	Motor vehicle & parts dealers	94,291	94,291	127,331	127,331	1,938,266	660,987	0
442	Furniture & home furnishings stores	46,532	45,755	65,485	63,265	596,538	129,479	0

Table VI-3.
Industry Profile (continued)

NAICS Code	Industry	Total Number of Firms	Number of Affected Firms	Total Number of Establishments	Number of Affected Establishments	Total Employees	Employees to be Trained	Number of SDSs Produced
44-45	**Retail Trade**							
443	Electronics & appliance stores	30,657	12,356	52,470	32,940	500,780	44,615	0
444	Building material & garden equipment & supplies dealers	62,011	62,011	88,304	88,304	1,373,961	284,191	0
445	Food & beverage stores	116,280	67,664	151,031	101,410	2,881,783	389,067	0
446	Health & personal care stores	43,864	43,864	89,406	89,406	1,069,187	423,319	0
447	Gasoline stations	66,431	39,008	115,533	86,524	888,705	96,582	0
448	Clothing & clothing accessories stores	67,035	6,754	155,371	29,316	1,648,157	29,316	0
451	Sporting goods, hobby, book, & music stores	41,057	10,899	60,145	28,027	639,694	34,108	0
452	General merchandise stores	10,460	3,163	47,456	40,015	2,897,472	198,992	0
453	Miscellaneous store retailers	97,730	43,045	123,374	66,575	813,827	87,799	0
454	Nonstore retailers	40,168	32,492	47,723	39,680	511,558	105,840	0
48-49	**Transportation & Warehousing**							
481	Air transportation	2,929	1,775	5,730	4,537	480,648	67,816	0
483	Water transportation	1,476	1,476	1,928	1,928	68,947	43,190	0
484	Truck transportation	106,632	106,632	121,419	121,419	1,476,397	1,191,682	0
485	Transit & ground passenger transportation	15,536	7,500	18,322	10,265	440,623	38,072	0
486	Pipeline transportation	241	241	2,775	2,775	42,445	20,810	0
487	Scenic & sightseeing transportation	2,680	1,944	2,781	1,979	17,747	4,351	0
488	Support activities for transportation	30,332	30,332	38,566	38,566	610,641	295,204	0
492	Couriers & messengers	8,073	8,073	13,845	13,845	569,190	367,737	0
493	Warehousing & storage	7,410	7,410	14,440	14,440	679,077	415,296	0
51	**Information**							
511	Publishing industries	22,876	16,911	31,508	25,398	1,034,709	152,798	0
512	Motion picture & sound recording industries	21,258	3,565	24,883	7,091	320,647	12,811	0
515	Broadcasting (except Internet)	5,108	2,098	10,415	7,292	293,968	11,379	0
516	Internet Publishing and Broadcasting	9,590	2,753	50,078	43,091	1,201,922	46,525	0
517	Telecommunications	2,400	426	2,746	731	46,627	977	0
518	Internet Service Providers, Web Search Portals, and Data Processing Services	11,613	2,669	19,922	8,960	446,781	9,362	0
519	Other Information Services	3,408	611	4,227	1,130	54,659	1,145	0

Table VI-3.
Industry Profile (continued)

NAICS Code	Industry	Total Number of Firms	Number of Affected Firms	Total Number of Establishments	Number of Affected Establishments	Total Employees	Employees to be Trained	Number of SDSs Produced
52	**Finance & Insurance**							
521	Monetary authorities - central bank	68	27	104	62	19,919	567	0
522	Credit intermediation & related activities	66,462	6,003	232,716	15,948	3,226,219	15,948	0
523	Securities intermediation & related activities	57,933	2,107	90,065	4,566	942,086	4,566	0
524	Insurance carriers & related activities	138,876	14,205	181,528	48,000	2,326,944	48,000	0
525	Funds, trusts, & other financial vehicles (part)	2,213	389	3,678	1,038	33,396	1,098	0
53	**Real Estate & Rental and Leasing**							
531	Real estate	270,268	218,115	312,524	257,057	1,554,163	482,590	0
532	Rental & leasing services	28,435	28,435	65,046	65,046	638,277	183,927	0
533	Lessors of intangible assets, except copyrighted works	2,476	802	2,568	888	31,735	1,687	0
54	**Professional, Technical & Technical**							
5411	Legal services	181,525	4,757	191,351	5,435	1,206,577	5,435	0
5412	Accounting, tax return prep, bookkeeping, & payroll services	108,428	12,421	123,415	24,952	1,357,368	27,843	0
5413	Architectural, engineering, & related services	101,108	26,500	117,115	42,049	1,434,803	64,179	0
5414	Specialized design services	34,485	10,849	34,783	11,089	134,739	14,769	0
5415	Computer systems design & related services	104,469	6,144	116,769	11,112	1,297,710	11,112	0
5416	Management, scientific, & technical consulting services	143,228	26,431	151,766	34,479	1,015,109	63,181	0
5417	Scientific R&D Serv.	14,009	5,971	17,787	9,640	688,052	47,136	0
5418	Advertising & related services	36,980	13,199	40,275	16,329	445,590	37,736	0
5419	Other professional, scientific, & technical services	64,704	64,704	74,295	74,295	599,993	214,139	0
55	**Management of Companies**							
551111	Offices of bank holding companies	1,049	777	1,313	1,032	20,046	2,065	0
551112	Offices of other holding companies	7,438	4,423	8,238	5,198	178,577	18,393	0
551114	Corporate, subsidiary, & regional managing offices	20,807	19,949	41,092	40,201	2,922,779	301,043	0
56	**Adm and Support & Waste Managmt**							
561	Administrative and Support Serv.	311,675	311,675	363,043	363,043	9,628,468	4,589,001	0
562	Wastemanagement & Remediation Serv.	17,156	17,156	21,458	21,458	355,193	248,661	0
61	**Educational Services**							
6111	Elementary & secondary schools	18,666	15,913	21,066	18,291	827,165	69,423	0
6112	Junior colleges	468	346	862	740	80,568	4,642	0

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Table VI-3.
Industry Profile (continued)

NAICS Code	Industry	Total Number of Firms	Number of Affected Firms	Total Number of Establishments	Number of Affected Establishments	Total Employees	Employees to be Trained	Number of SDSs Produced
6113	Colleges, universities, & profesional schools	2,456	2,091	4,022	3,657	1,572,333	185,456	0
6114	Business schools, & computer & management training	6,995	649	7,640	857	65,818	857	0
6115	Technical & trade schools	6,681	2,476	8,019	3,741	119,020	6,307	0
6116	Other schools & instruction	35,969	4,555	38,506	5,477	302,908	5,477	0
6117	Educational support services	6,071	973	6,781	1,557	71,573	1,814	0
62	**Healthcare and Social Assistance**							
621	Ambulatory health care services	467,925	467,925	547,183	547,183	5,817,039	3,423,528	0
622	Hospitals	4,164	4,164	7,352	7,352	5,477,818	3,846,705	0
623	Nursing & residential care facilities	34,648	34,648	75,606	75,606	3,043,133	1,941,252	0
624	Social assistance	113,068	88,641	154,090	129,034	2,459,657	332,342	0
71	**Arts, Entertainment & Recreation**							
711	Performing arts, spectator sports, & related industries	43,415	14,721	44,260	15,491	436,072	52,870	0
712	Museums, historical sites, & similar institutions	6,823	3,905	7,312	4,358	128,539	14,892	0
713	Amusement, gambling, & recreation industries	66,499	54,547	73,650	61,474	1,443,956	251,213	0
72	**Accommodation & Food Services**							
721	Accommodation	53,300	53,300	63,903	63,903	1,907,554	658,752	0
722	Foodservices & drinking places	423,999	71,510	568,586	127,312	9,657,310	127,312	0
81	**Other Services**							
811	Repair & maintenance	208,647	208,647	226,131	226,131	1,322,952	909,073	0
811121	Automotive body, paint, & interior repair & maintenance	34,683	34,683	35,850	35,850	222,381	152,810	0
812	Personal & laundry services	172,890	132,555	212,530	169,669	1,380,284	272,379	0
812320	Drycleaning & laundry services (except coin-operated)	23,180	20,821	26,370	23,120	167,447	33,043	0
812921	Photofinishing laboratories (except one-hour)	1,050	928	1,139	964	10,647	2,101	0
813	Religious/grantmaking/civic/professional & similar org	296,045	125,355	305,591	134,330	2,816,537	228,997	0
99	**State and Local Government**							
9992	State Government	n.a.	n.a.	n.a.	n.a.	2,242,536	324,618	0
9993	Local Government	n.a.	n.a.	n.a.	n.a.	6,706,471	1,841,671	0
Total		**6,146,382**	**4,223,431**	**7,720,753**	**5,403,278**	**129,924,808**	**43,840,000**	**1,414,636**
Total for firms producing SDSs		**74,781**	**74,616**	**91,367**	**90,628**	**3,423,801**	**2,358,340**	**1,414,636**
Total for firms not producing SDSs		**6,071,601**	**4,148,815**	**7,629,386**	**5,312,650**	**126,501,007**	**41,481,660**	**0**

Note: Costs are expressed in 2010 dollars

Source: Office of Regulatory Analysis, OSHA based on PP&E (2009) and ERG (2012)

As shown in Table VI–3, approximately 75,000 firms, in over 90,000 establishments, create hazardous chemicals (*i.e.,* products, substances, or mixtures) for which a label and SDS are required in accordance with the OSHA HCS. In response to testimony presented on the proposed rule, OSHA has revised its estimate of the number of SDSs (and corresponding container labels) potentially affected by the revisions to the HCS from approximately 0.9 million SDSs to approximately 1.4 million SDSs.[10] OSHA estimates that the adoption of GHS will not significantly change the numbers of labels and SDSs produced.

In many instances, firms may be already producing several different versions of SDSs and labels for the same product to satisfy different regulatory requirements in different jurisdictions, including SDSs and labels consistent with GHS criteria. For these products, the revisions to the OSHA HCS will be satisfied relatively easily and may result in a reduction in overall compliance costs by reducing the number of different labels and SDSs needed for each affected product.

The second category of industries and establishments affected by the revisions contains those that do not produce labels or SDSs but are required to provide their employees with access to SDSs supplied by others as part of a hazard communication program covering chemicals to which employees may be exposed in the workplace. The effects on these establishments will generally involve promoting employee awareness of and management familiarization with the revisions to SDSs and labels.

As shown in Table VI–3, an estimated 41 million employees are potentially exposed to hazardous chemicals in these workplaces and are covered by the OSHA HCS. Including employees working in establishments that produce labels and SDSs, a total of 44 million employees would potentially need to become familiar with the revisions to SDSs and labels. The estimated number of employees to be trained, as shown in Table VI–3, is equal to the number of production employees in all affected industries. As also shown in Table VI–3, OSHA estimates that there are over five million workplaces where employees may be potentially exposed to hazardous chemicals.

OSHA received comment from the American Wind Energy Association and Duke Energy Business Services, LLC that asserted that the Agency had underestimated the number of employees that would need to be trained in the electric power generation industry (Document ID #0386 and 0453). OSHA estimated that approximately 49 percent of employees were production employees in this industry who would need to be trained to familiarize them with the revisions to the HCS and that an additional 11,000 managers and logistic personnel would receive training as well. The commenters felt that 60 to 70 percent of employees would need to be trained. OSHA evaluated the concerns of the AWEA and Duke Energy and has decided to defer to their expertise on the subject and adopt their recommendation (by changing the percentage of employees who would need to be trained in NAICS 2211 Electric power generation, transmission and distribution to 65 percent). The change from 49 percent of employees to 65 percent of employees to be trained results in a negligible change to the costs to this industry. Increasing the number of production employees needing training from 245,715 to 315,623 results in an increase of about $39 per firm in annualized costs to this industry, and the costs as a percent of revenues would increase from 0.0052 percent to 0.0060 percent.

D. Benefits

OSHA estimates that the promulgation of the revisions to the HCS will result in substantial benefits from a variety of sources. OSHA's estimates of the benefits include improvements in occupational safety and health and a corresponding reduction in the annual number of injuries, illnesses, and fatalities sustained by employees from exposure to hazardous chemicals; cost reductions for producers of hazardous chemicals; increased efficiencies in the handling and use of hazardous chemicals; reduced costs to provide HCS training to new employees; and other benefits as described in this section.

OSHA expects the revisions to the HCS will result in an increased degree of safety and health for affected employees and a reduction in the numbers of accidents, fatalities, injuries, and illnesses associated with exposures to hazardous chemicals.

As explained in detail in Sections IV and XIII of this preamble, the design of GHS was based on years of extensive research that demonstrated the effectiveness of pictograms, specific signal words, and a standardized format.[11] As a result of this research, OSHA is confident that the GHS revisions to the HCS for labeling and safety data sheets will enable employees exposed to workplace chemicals to more quickly obtain and more easily understand information about the hazards associated with those chemicals. Warning labels on products covered by the standard, which provide an immediate visual reminder of the chemical hazards involved, would be made more intuitive, self-explanatory, and logical, and the nature and extent of any associated hazards would be more readily understood as a result of the training required under the standard. Relatedly, the revisions are expected to improve the use of appropriate exposure controls and work practices that can reduce the safety and health risks associated with exposure to hazardous chemicals.

In addition, the standardized format of the safety data sheets would enable critical information to be accessed more easily and quickly during emergencies. This can reduce the risk of injury, illness, and death to exposed employees and to rescue personnel and can also reduce property damage.

It is difficult to quantify precisely how many injuries, illnesses, and fatalities will be prevented due to the revisions to the HCS. The benefits associated with the current HCS may help provide a general sense of the potential magnitude of the benefits of these revisions. A discussion and analysis of the benefits that would result from the implementation of the current OSHA HCS were included as part of the rulemaking process for the promulgation of the current standard in the 1980s.

The current HCS was originally promulgated in two parts. First, a final rule covering the manufacturing industry was published in the **Federal Register** in 1983 (48 FR 53280, Nov. 25, 1983); a second final rule covering other general industries, maritime industries, construction industries, and agricultural industries was published in the **Federal Register** in 1987 (52 FR 31852, Aug. 24, 1987).

For both of these final rules, OSHA conducted research specifically

[10] A representative from the Independent Lubricant Manufacturers Association suggested that OSHA had underestimated the number of SDSs produced per firm in the lubricating oils industry and that the average firm in the industry produces approximately 1,700 lubricating products requiring an SDS. OSHA has considered this testimony and accepted the estimate of 1,700 SDSs produced per firm in NAICS 324191: Petroleum lubricating oil & grease manufacturing. With 329 affected establishments in this industry, OSHA's estimate of the number of affected SDSs has increased by approximately 0.4 million SDSs in the FEA (as compared to the PEA). The industry profile has been revised accordingly (Document ID #0495 Tr. 296–7).

[11] See Sections IV and XIII of this preamble for a discussion of the studies related to these issues.

regarding the benefits that could be expected from the promulgation of these standards, as described in the preambles to the final rules. In addition, through the rulemaking process, OSHA evaluated the best available evidence, including the data and comments submitted by the public.

The information, data sources, analyses, and findings related to the estimation of the benefits associated with these standards are included in the public records for the rulemakings. The complete rulemaking records for these standards can be found in OSHA public dockets H–022B and H–022D.

The estimated benefits associated with the Hazard Communication Standards were published in the **Federal Register** with the promulgation of the final standards (48 FR 53329, Nov. 25, 1983 and 52 FR 31872, Aug. 24, 1987). OSHA estimated that compliance with the various Hazard Communication Standards would produce annual benefits that would include the prevention of 31,841 non-lost-workday injuries and illnesses, 20,263 lost-workday injuries and illnesses, 6,410 chronic illnesses, and 4,260 fatalities.

Using a willingness-to-pay approach for valuing these benefits, OSHA determined that the annual safety and health benefits would be over $18.2 billion annually, expressed in 1985 dollars. Applying the BLS inflation calculator, the $18.2 billion of benefits in 1985 is equivalent to $36.7 billion of benefits in 2010 after adjusting for inflation of 102 percent of the period.[12] [13]

Based on the material presented in this preamble, OSHA expects that the revisions to the HCS will result in incremental improvements in employee health and safety above that already achieved under the current HCS. In the PEA, OSHA estimated that compliance with the revisions to the HCS would result in benefits equal to 1 percent of the health and safety benefits attributed to the current HCS. It is conceivable that actual benefits might be somewhat lower, but because GHS is expected to result, in some situations, in more timely and appropriate treatment of exposed workers, OSHA expects that actual benefits may be larger, perhaps several times larger.[14] OSHA solicited comment on the anticipated health and safety benefits of the revisions to the HCS and received numerous comments indicating that stakeholders anticipate increased worker protection as a result of the revisions. The Alliance of Hazardous Materials Professionals responded that they believed that these revisions to the HCS would yield ''benefits in preventing injuries and illnesses'' (Document ID #0327) and DuPont Company reported that they ''believe domestic implementation of the GHS will serve to further enhance worker protection through a more standardized approach to hazard classification and communication'' (Document ID #0329). The National Association of Chemical Distributors said that their association members ''believe that there are benefits associated with preventing injuries, illnesses and fatalities through clearer and more accessible information'' (Document ID #0341) and likewise, the Communications Workers of America reported that they believed that application of the elements of the revised HCS ''would lead to a reduction in the incidence of workplace injuries, illnesses, and fatalities'' (Document ID #0349). This sentiment was echoed by the American Health Care Association, National Center for Assisted Living who felt that the revised HCS will ''reduce incidence of chemical-related illnesses and injuries'' (Document ID #0346), and the Associated General Contractors of America who felt that the revisions ''will allow employees to easier understand hazard information and will assist in better job planning and injury prevention'' and that they ''should reduce eye and skin contact injuries'' (Document ID #0404). The U.S. Chamber of Commerce stated that they ''(b)elieve * * * the new rule will improve workplace safety'' (Document ID #0397). One commenter (Document ID #0033), representing an organization whose membership includes first responders and emergency management, wrote the following in response to the Advance Notice of Proposed Rulemaking (ANPR):

> The emergency planning and first responder community depends upon MSDS information for life and safety. The ability to immediately examine an MSDS and glean hazard and response information at the scene of an incident is critically important. The lives of first responders, employees of the facility and the public depend upon the accuracy and ease of use of the MSDS.

Some stakeholders questioned whether the revisions would result in any health and safety benefits. For example, the Society of Plastics Industries, Inc. felt that there was a ''serious question as to what improvements to workplace safety and health can reasonably be expected'' (Document ID #0392), and the U.S. Chamber of Commerce was concerned that OSHA ''overestimated the utility and benefits of this proposed revision to the HCS'' (Document ID #0397). However, even this commenter suggested the rule '' ''* * * will promote consistency in the identification, classification, and labeling of chemicals, improve workplace safety, and facilitate business growth and international trade.'' (Document ID #0392). The Agency feels that the record supports that these revisions to the HCS will reduce confusion and lead to better hazard communication, which will translate into fewer accidents, illness, injuries, and fatalities. OSHA's estimate that these revisions will provide one percent of the benefits attributed to the original HCS rulemaking represents a very small and easily realized improvement of workplace safety and health. The Agency did not receive additional comments on what level of benefits commenters believed would be more reasonable or accurate and therefore OSHA has retained the estimated health and safety benefits as part of the FEA. OSHA is confident that its initial estimates of the reductions in injuries, illnesses, and fatalities is a minimal estimate given the general agreement by almost all parties that the rule will have safety and health benefits.

OSHA prepared a sensitivity analysis to test the effect of variations in its estimates and found that, even if the estimated health and safety benefits were overstated by a factor of 2 (or even if the health and safety benefits were omitted altogether—see Table VI–1), the benefits would still exceed the costs of the final rule. Those results can be seen in Section VI.L: Sensitivity Analysis in this preamble.

Using the 1 percent estimate, OSHA anticipates that once all requirements take effect for the final rule, they would result in the prevention of an additional 318 non-lost-workday injuries and illnesses, 203 lost-workday injuries and illnesses, 64 chronic illnesses, and 43 fatalities annually. The monetized value of these health and safety benefits is an estimated $367 million annually in 2010 dollars.

[12] *http://data.bls.gov/cgi-bin/cpicalc.pl.* The BLS inflation calculator was used on January 18, 2011.

[13] Using OSHA's current willingness-to-pay estimates of $8.7 million per life saved and $62,000 per injury avoided, those benefits are equivalent to about $38.7 billion worth of benefits in 2010 dollars. OSHA decided to use the lower benefits estimate in the text ($36.7 billion), which is consistent with the estimation procedure used for the proposed rule.

[14] OSHA believes that a reasonable range for the magnitude of the health and safety benefits resulting from the proposed revisions would be between 0.5 percent and 5 percent of the benefits associated with the current HCS. These ranges are considered in the sensitivity analysis presented in Section VI.L of this preamble.

In order to obtain a sense of how realistic these estimated safety and health benefits are in light of the current level of occupational injuries, illnesses, and fatalities that are chemically related, OSHA reviewed relevant BLS data for the periods 1992–2007. OSHA's examination of these data shows a 42 percent decline in chemically related acute injuries and illnesses over the period, but both remain significant problems—55,400 chemically related illnesses and 125 chemically related fatalities in 2007. However these readily measurable reported acute illnesses and fatalities are dwarfed by chronic illnesses and fatalities. For chronic illness fatalities, there is little information available, and certainly no annual time-series data. The most recent estimate is that there were 46,900 to 73,700 fatalities due to occupational illnesses in 1992 (Document ID #0274). OSHA believes these more recent data from 1992–2007 suggest that the HCS has had a desirable effect on chemically related illnesses and injuries, but there remains a very significant role for further and better hazard information, as would be provided by aligning the current HCS with the GHS.

The annual health and safety benefits associated with the revisions to the OSHA HCS are estimated to begin after full implementation of the changes and associated employee training. The phase-in period for the main provisions of the final rule is approximately four years from the date of publication. Thus, in order to calculate the estimated annualized health and safety benefits over a twenty-year period associated with this rule in a manner that would be comparable to the corresponding annualized costs, the delay in the realization of the benefits was incorporated into the calculation. Using a discount rate of 7 percent, the estimated annual benefits of $367 million, beginning four years after the effective date of the final rule, were multiplied by 0.6803 to calculate the annualized benefits over a twenty-year period beginning with the effective date of the final rule.[15] Thus, the annualized monetized benefits associated with the reduction in safety and health risks attributable to the revisions to the HCS are an estimated $250 million.

[15] The formula for annualizing the benefits is equal to: $[(1.07)^{-4}] * [(1—(1.07)^{-16})/0.07] * [0.07/(1—(1.07)^{-20})]$,where the first term in brackets reflects the four year delay until annual benefits are realized; the second term in brackets reflects the present value of sixteen years of annual benefits (from years 5 through 20), and the third term in brackets annualizes the present value of benefits over a 20-year period.

Other substantial benefits, in addition to the improved occupational safety and health of affected employees, are also expected to result from this rulemaking, as discussed in the following paragraphs.

The harmonization of hazard classifications, safety data sheet formats, and warning labels for affected chemicals and products would yield substantial savings to the businesses involved in these activities. Fewer different SDSs would have to be produced for affected chemicals, and many SDSs would be able to be produced at lower cost due to harmonization and standardization. The record supports these savings with comment from Stericycle, Inc. stating that they anticipate that ''less time will be spent in reviewing new chemicals due to the changed format and better characterizations of the hazard'' (Document ID #0338), from the Ecological and Toxicological Association of Dyes and Organic Pigments Manufacturers (ETAD), which felt that these revisions to the HCS would ''ultimately increase efficiency and reduce time needed to prepare labels and SDSs'' (Document ID #0374), and from ORC Worldwide, which said that the ''use of one harmonized classification system is expected to significantly reduce the time needed to classify global products'' (Document ID #0123). The American Chemistry Council reported that they would ''expect a positive economic and time impact on developing and reviewing SDSs'' (Document ID #0393) as a result of these revisions to the HCS. Troy Corporation reported that they believed that ''providing harmonized SDSs will reduce development and maintenance time'' (Document ID #0352) and that there ''will be tangible savings when materials only have to be classified once instead of multiple times'' (Document ID #0128). Two commenters suggested that harmonization could lead to a 50 percent time savings in classification (Document ID #0313 and 0327). The benefits represented by these cost reductions would primarily affect businesses involved in chemical manufacturing.

In addition, reductions in operating costs are also expected as a result of the promulgation of the revisions to the HCS for many businesses that purchase or use hazardous chemicals. The current non-uniformity of SDSs and labels received by establishments in many industries requires employees and managers to spend additional time on a daily basis to ascertain the appropriate way to handle and store the hazardous chemicals in their workplaces. Under the revised standard, the presence of uniform and consistent information would help employers and employees to make decisions more efficiently and save substantial time. There is ample evidence in the record that stakeholders anticipate that the revisions to the HCS will improve the quality of the SDSs and labels and that the standardization of the SDS and label elements will increase the consistency of the hazard information and better communicate the hazards to users (*See* Document ID #0313, 0327, 0329, 0334, 0335, 0336, 0339, 0341, 0344, 0347, 0351, 0352, 0354, 0357, 0363, 0365, 0370, 0372, 0374, 0377, 0379, 0382, 0386, 0389, 0390, 0399, 0404, 0405, 0408, 0409, 0410, and 0414). Stakeholders reported that they expected that simplification and reduction in ''the number of documents that we manage * * * will reduce expenses'' (Document ID #0018), and Tom Duffy testified on behalf of the United Steelworkers of America at the Pittsburgh, PA, public hearing that a uniform system for SDSs would result in time savings (Document ID #0499 Tr. 171–72). These sentiments were echoed by Gary Valasek, who represented the Intercontinental Chemical Corporation (Document ID #0499 Tr. 63–64), the National Association of Chemical Distributors, which stated that standardized SDSs and labels would ''create a more efficient process for chemical distributors'' (Document ID #0341), and Wacker Chemical Company, which reported ''that uniformity in SDS and labels will help employees and customers * * * find needed information'' (Document ID #0335). The International Brotherhood of Teamsters reported that the ''standardized, specific approach to labels and SDSs with a set format, content, and order will help with consistency and comprehensibility, and improve the SDSs ability to communicate hazard info to workers'' (Document ID #0357). The American Industrial Hygiene Association felt that ''standardized label elements will make hazard identification easier'' (Document ID #0365). The American Petroleum Institute commented that the revisions to the HCS would ''improve downstream hazard assessments'' (Document ID #0376). OSHA solicited comment on its estimated monetized benefits in the PEA arising from increased efficiency in handling hazardous materials. While a few stakeholders questioned OSHA's benefits estimates, they did not offer an alternative methodology for estimating potential time savings; nor did they offer quantitative alternatives for OSHA

to evaluate. As demonstrated throughout this preamble, stakeholders were largely supportive of OSHA's estimates.

For the benefits estimated in the PEA, PP&E worked closely with stakeholders, conducting multiple interviews and extensive research on the processes that companies use to classify chemical hazards, to develop SDSs and labels, and to handle, store, and use hazardous chemicals. Based on interviews with hazardous materials professionals in more than a dozen affected establishments, PP&E evaluated how these processes would be affected by the proposed revisions to the HCS and analyzed the potential savings that could reasonably be expected as a result of adopting these revisions.

For the PEA, OSHA used the PP&E 2009 report (Document ID #0273) to develop estimates of the cost reductions that the affected companies would expect to obtain as a result of the revisions to the OSHA HCS.[16] Among the various benefits expected to be realized as a result of the implementation of the revisions, as described in this section, OSHA quantified two general categories of cost savings in the PEA and has maintained the methodology employed to create those estimates [17] but used the most recent available economic data in arriving at the estimates of costs presented in this final analysis.

In the PEA (74 FR 50280, 50322, Sept. 30, 2009), OSHA estimated the number of hours that each industry would save by improving the efficiency and productivity of personnel who use SDSs in performing their job functions. OSHA estimated that the amount of time spent during affected activities in the manufacturing sector could be reduced by 3 percent for health and safety supervisors and by 15 percent for logistics personnel specializing in handling hazardous chemicals.[18] The Agency updated the number of health and safety supervisors and logistics personnel for this FEA to reflect the most recent data and estimated that the time reductions for handling hazardous chemicals, and the associated cost savings, would apply to about 7,000 health and safety supervisors and 49,000 logistics personnel in the manufacturing sector and would yield annualized benefits of approximately $475 million.[19] Similar potential time and cost savings as a result of the revisions to the OSHA HCS were not quantified for the non-manufacturing sectors.

As part of the PEA (*Id.* at 50322–23), OSHA also estimated that, for the manufacturing sectors, the costs associated with the creation and revision of SDSs in future years would be reduced as a result of the revisions to the HCS. The methodology for creating this estimate has been retained for the FEA but new economic data were incorporated where available. The creation and revision of individual SDSs will be less burdensome, and, in addition, fewer different versions of SDSs would need to be produced for affected chemicals and products. OSHA estimated that, depending on firm size, the combination of these two effects would result in annual savings equivalent to between 2.5 and 4 hours of a professional's time per existing SDS and a total annualized savings of $32 million.[20]

Combining the improved productivity of personnel who use SDSs and the improved efficiency of those who revise SDSs and labels, OSHA concluded that the annualized productivity savings for companies would be an estimated $507 million.

Another area in which the final rule is likely to provide cost savings to industry is in the provision of hazard communication training to new employees after the transition period. Both the current HCS and the revised HCS require employers to provide training on the safe handling of chemicals, on understanding SDSs and labels, and on being familiar with other information crucial to worker safety. Employers are permitted to offer training for categories of hazards (such as flammability or carcinogenicity) rather than training individually on each chemical. The primary sources of information for this training are the SDSs supplied by manufacturers, and the primary method for employees to determine the hazard associated with a specific chemical they are using is through the manufacturer's HCS-compliant label.

Under the revised HCS, SDSs and labels produced in the United States will all be formatted in the same way. As more countries and regions adopt the GHS, fewer variations of SDSs and labels will be seen in the workplace. Information will be located in the same place on every SDS and label an employee will encounter. Employers will no longer have to train on as many SDS formats; nor will they need to devote as many resources to gather information on work practices, PPE, etc. SDSs and labels will be required to provide complete hazard information, and the language that the hazard information is presented in will be uniform across labels and section 2 of the SDSs. The inclusion of the pictograms and standardized hazard statement removes or, at least reduces, training time spent on interpreting various—and in some cases ambiguous—hazard warnings that current SDSs and labels may bear. The standardized labels and elements based on the detailed criteria for each hazard also greatly simplify training by facilitating training on ''categories of hazard'' rather than having to cover every chemical individually where the hazard determination is based on broad definitions. All of these changes can be expected to reduce the costs of training employees to recognize chemical hazards in the workplace.

The rulemaking record included numerous descriptions of the difficulties for both employees and

[16] The full final report from PP&E detailing the extensive process by which these estimates were derived is available on the rulemaking docket. See Document ID #0550.

[17] There is no indication that two years would have been sufficient time to affect the processes involved with handling hazardous chemicals, and therefore OSHA did not feel it necessary to re-estimate the savings parameters established through PP&E's research.

[18] For example, as described by PP&E (2009, Document ID #0273), the job of a logistics person, depending on the company, consists of the following tasks: (1) Receive hazardous chemicals; (2) gather the associated SDSs—either those that are attached to the shipment or those that are attached to the invoice; (3) extract the relevant information from the SDSs and enter it in the plant's SDS management system; (4) insert paper copies of the SDSs into the (hard copy) SDS management folder; (5) if the information is not available (particularly in the older 9-section SDSs), then look for 12-section SDSs prepared by some other manufacturer; (6) prepare in-plant labels; (7) determine special storage and use requirements, make appropriate arrangements for short-term and long-term storage, and distribute information to different process lines or field offices; (9) participate in the training of line supervisors and production workers; (10) train new employees; and (11) carry out other logistics duties at the plant. The GHS standard, by making the structure and content of SDS uniform, would help to reduce the time it takes to perform each of the above tasks.

[19] These estimates assume 2,000 hours of work a year for 7,070 health and safety supervisors and 49,486 logistics personnel specializing in handling hazardous chemicals in the manufacturing sector; an hourly wage of $66.01 and $45.17, respectively; and a time savings of 3 percent and 15 percent, respectively, for health and safety supervisors and logistics personnel. The resulting annual savings of $699 million was multiplied by 0.6803 to annualize the savings over a twenty-year period with savings not accruing until four years after the effective date of the revisions (Document ID #0273).

[20] These estimates assume ⅓ of the estimated 1,414,636 SDSs are reviewed each year; savings per SDS is between 2 ½ and 4 hours, depending on firm size (with an average per SDS of about 3.2 hours); personnel reviewing the SDSs receive an hourly wage of $66; and existing compliance rates are between 1 percent and 75 percent, depending on firm size (with an average per SDS of about 53 percent). The resulting annual savings of $47 million was multiplied by 0.6803 to annualize the savings over a twenty-year period with savings not accruing until four years after the effective date of the revisions.

employers associated with training under the current HCS (see Document ID #0307, 0499 Tr. 92–3, 0499 Tr. 167–8, 0499 Tr. 175, 0527) and supported the idea that training would be easier—and therefore cheaper—under the revised HCS (see Document ID #0123, 0338, 0408, 0414, 0494 Tr. 74–5, 0495 Tr. 308–9, 0497 Tr. 95–6, 0499 Tr. 93, 0499 Tr. 96, 0499 Tr. 190–91). Nevertheless, given that the annualized benefits of the final rule already significantly exceed the costs, OSHA did not feel it was necessary to try to develop, from the limited data available, a quantified estimate of the monetized savings resulting from simplified training.[21]

An additional benefit of the adoption of GHS is that it would facilitate international trade, increasing competition, increasing export opportunities for U.S. businesses, reducing costs for imported products, and generally expanding the selection of chemicals and products available to U.S. businesses and consumers. The Society for Chemical Manufacturers and Affiliates, for example, stated in their comment that while ''SOCMA member companies do not foresee significant savings from the change * * * for companies that do business globally there will be'' (Document ID #0402). While OSHA did not take quantitative benefits for these savings, the Agency believes that firms that operate globally may realize a cost savings as a result of the adoption of the GHS (Document ID #0336, 0339, 0361, and 0405). As a result of the direct savings resulting from the harmonization and the associated increase in international competition, prices for the affected chemicals and products, and the corresponding goods and services using them, should decline, although perhaps only by a small amount.

Finally, the GHS modifications to the OSHA HCS would meet the international goals for adoption and implementation of the GHS that have been supported by the U.S. government. Implementing GHS in U.S. federal laws and policies through appropriate legislative and regulatory action was anticipated by the U.S. support of international mandates regarding the GHS in the Intergovernmental Forum on Chemical Safety, the World Summit on Sustainable Development, and the United Nations. It is also consistent with the established goals of the Strategic Approach to International Chemical Management that the U.S. helped to craft.

A number of commenters suggested that the benefits OSHA estimated will result from this rule were incorrect or overstated. The National Association of Homebuilders expressed a belief that OSHA's ''assumption that the proposed revisions to the HCS [would] result in cost reductions * * * due to productivity gains is false'' (Document ID #0372), while the American Composites Manufacturers Association voiced concern that the benefits OSHA had estimated were speculative (Document ID #0407). Southern Company submitted that ''the benefits of adopting the GHS are minimal at best'' (Document ID #0378). Applied Safety and Ergonomics, Inc., urged OSHA to adopt a more conservative view of the expected benefits as they asserted that ''it is possible that many of the implied or expected benefits of the proposed changes to the HCS may not materialize'' (Document ID #0396). OSHA takes these comments seriously and evaluated all concerns raised by stakeholders on the estimated benefits of this standard. Unfortunately, most commenters did not include adequate detail or data that would allow the Agency to evaluate alternative benefits estimates. While future benefits (or costs) cannot be estimated with scientific precision, OSHA believes that the estimated benefits associated with this standard are based on sound data and that the resulting estimates are reasonable and have largely been supported by testimony and comment from stakeholders. It should be noted that many commenters who raised questions or concerns over OSHA's benefits estimates still largely supported the overall aim of the rulemaking and wished to see OSHA proceed with promulgation. The Agency addresses the inherent uncertainty in the economic analysis in Section VI.L Sensitivity Analysis in this preamble. In that section, various parameters are adjusted to evaluate the impact on the overall cost and benefits of the rule, and OSHA finds that even if estimated benefits were grossly overstated, this standard's benefits would still exceed costs.

E. Technological Feasibility

In accordance with the OSH Act, OSHA is required to demonstrate that occupational safety and health standards promulgated by the Agency are technologically feasible. OSHA has reviewed the requirements that would be imposed by the rule, and has assessed their technological feasibility. As a result of this review, OSHA has determined that compliance with the requirements of the rule is technologically feasible for all affected industries.

The revisions to OSHA's HCS would require employers that produce chemicals to reclassify chemicals in accordance with the new classification criteria and revise safety data sheets and labels associated with hazardous chemicals. Compliance with these requirements is not expected to involve any technological obstacles. A comment in the record indicated that ''[s]ome of the work [* * *] has already been done in order to comply with GHS implementation in Asian countries'' (Document ID #0405; see also Document ID #0352, 0377, and 0410). In addition to stakeholder comments, a January 4, 2011 press release from the European Chemicals Agency (ECHA) announced that the ECHA had received 3,114,835 notifications of 24,529 substances for the Classification and Labelling Inventory. Industry was required to notify the classification and labeling of all chemical substances that are hazardous or subject to registration under the Registration, Evaluation and Authorization of Chemicals (REACH) regulation and placed on the EU market in accordance with the GHS criteria. NIOSH is also currently working to update its International Chemical Safety Cards and Pocket Guide to incorporate the GHS classifications, which will further reduce the technological burdens of reclassification borne by manufacturers. (For a more detailed discussion of the EU implementation of the GHS and NIOSH's classification work, *see* Section XIII. Summary and Explanation of the Final Rule in this preamble.) This evidence lends support to OSHA's assertion that the requirements of the revisions to the HCS will not prove technologically infeasible. The rule would also require employers whose workplaces involve potential exposure to hazardous chemicals to train employees on the relevant aspects of the revised approach to hazard communication. Affected employees would need additional training to explain the new labels and safety data sheets. Compliance with these requirements is not expected to involve any technological obstacles.

The revisions to the HCS will require establishments that package or label hazardous chemicals to affix labels that include hazard warning pictograms enclosed in a red bordered diamond. While some establishments may not currently be printing labels in colors other than black and white, color printing technology is widely available

[21] However, in the sensitivity analysis presented in Section VI.L of this preamble, OSHA develops an estimate of monetized cost savings from simplified hazard communication training based on one commenter's estimate of the percentage reduction in training time resulting from the final rule.

and printing labels with a red bordered diamond or purchasing preprinted labels with a red bordered diamond is not expected to involve any technological obstacles. Research conducted by ERG (2010) under contract for OSHA found that printer technology is rapidly evolving—resulting in lower costs for printers and printing supplies and making better technology available to a wider range of buyers. Combined with currently available printing technology, this clearly demonstrates that printing product labels in color is technologically feasible.

Compliance with all of the requirements of the rule can be achieved with readily and widely available technologies. Businesses in the affected industries have long been required to be in compliance with the existing HCS, which includes similar requirements. The revised HCS would simply require modifying the labels and SDSs for hazardous chemicals, adding some training to ensure employees are familiar with these changes, and upgrading printing technology with widely available color printers or purchasing preprinted color labels. No new technologies are required for compliance with the modifications to the HCS. OSHA is aware that many U.S. businesses in the affected industries have already begun implementing many of the requirements of the GHS in order to meet the new foreign requirements for exported products. Therefore, OSHA believes that there are no technological constraints associated with compliance with any of the requirements of the revisions to the HCS.

F. Costs of Compliance

Introduction

This section presents the estimated costs of compliance for the revisions to the OSHA HCS. The estimated costs of compliance represent the additional costs necessary for employers to achieve full compliance with the new requirements of the final rule. They do not include costs associated with firms whose current practices are already in compliance with the new requirements.

The costs of compliance with the revisions to the HCS consist of four main categories: (1) The cost of reclassification and revision of SDSs and labels, (2) the cost of management familiarization and other management costs associated with the administration of hazard communication programs, (3) the cost of training employees, and (4) the cost of printing labels for hazardous chemicals in color. The first three categories are considered to be one-time transitional costs and were included in the PEA in support of the proposed rule. The fourth category is new and was developed in response to comments on the proposed rule. It includes both one-time transitional costs and costs that recur throughout the life of the rule.

The estimated compliance costs are based on a determination made by the Agency that the revisions would not significantly change the number of chemicals or products for which an SDS will be required. This also means that there will be no change in the number of establishments that are required to implement a hazard communication program. OSHA received no comments as part of the rulemaking record for this standard challenging this determination.

Other than the direct costs of reclassification and relabeling, the estimated compliance costs do not include any further costs or impacts that may result from the reclassification or relabeling of chemicals and products already subject to the HCS, such as possible changes in production or demand for products. Theoretically, such impacts, if any, with regard to possible changes in the uses and applications of affected chemicals, could be positive as well as negative. OSHA has determined that such effects, if any, will not be significant, and received no comment from stakeholders disputing this determination.

In addition to the revisions to the HCS, the rulemaking also includes related revisions to other OSHA standards. The revisions to the other standards generally ensure that all OSHA requirements related to hazard communication remain consistent with each other and become consistent with the revised HCS. OSHA has determined that the revisions to the other standards would not impose significant costs beyond those reflected in the compliance cost estimates for this rulemaking.

In order to have compliance costs presented on a consistent and comparable basis across various regulatory activities, the costs of compliance for this rule are expressed in annualized terms. Annualized costs represent the more appropriate measure for assessing the longer-term potential impacts of the rulemaking and for purposes of comparing compliance costs and cost-effectiveness across diverse regulations with a consistent metric. In addition, annualized costs are often used for accounting purposes to assess the cumulative costs of regulations on the economy or specific parts of the economy across different regulatory programs or across years. Annualized costs also permit costs and benefits to be presented in a comparable manner.

A seven percent discount rate was applied to costs incurred in future years to calculate the present value of these costs for the base year in which the standard becomes effective, and the same discount rate was then applied to the total present value costs, over a 20-year period, to calculate the annualized cost.[22]

Table VI–4 shows the estimated annualized compliance cost by cost category and by industry sector. All costs are reported in 2010 dollars. As shown in Table VI–4, the total annualized cost of compliance with the rulemaking is estimated to be about $201 million. Of this amount, the annualized cost of chemical hazard reclassification and revision of SDSs and labels is an estimated $22.5 million, the annualized cost of training employees is an estimated $95.4 million, the annualized cost of management familiarization and other management costs is an estimated $59.0 million, and the additional annualized label printing costs, incurred to comply with the requirement of a black pictogram surrounded by a red-bordered diamond, is an estimated $24.1 million.

As shown at the bottom of Table VI–4, most of the compliance cost associated with chemical hazard reclassification and revision of SDSs and labels would be borne by the chemical manufacturing industry (shown as the total for industries that produce SDSs and labels). Table VI–4 also shows that compliance costs are spread across all industries in the U.S. economy subject to OSHA jurisdiction, reflecting the fact that employee exposures to hazardous chemicals occur in almost every industry sector.

Other than the costs of printing labels in color, OSHA expects that all compliance costs would be incurred over a period of four years, as the rule would incorporate a four-year transition

[22] OSHA annualized costs for this rule over a 20-year period in accordance with Executive Order 13563, which directs agencies ''to use the best available techniques to quantify anticipated present and future benefits and costs as accurately as possible.'' In addition, OMB Circular A–4 states that analysis should include all future costs and benefits using a ''rule of reason'' to consider for how long it can reasonably predict the future and limit its analysis to this time period. Annualization should not be confused with depreciation or amortization for tax purposes. Annualization spreads costs out evenly over the time period (similar to the payments on a mortgage) to facilitate comparison of costs and benefits across different years. In this analysis, OSHA estimated a lifetime for hardware purchases (5 years for printers, for instance) which is unrelated to the annualization period. OSHA felt that an annualization period much shorter than 20 years (say, 10 years) would have been inappropriate for this rule because of the lagged phase-in of provisions (some of which will not take effect until five years after the final rule is published).

period into the compliance schedule for the standard. Specifically, for purposes of estimating the annualized compliance costs, OSHA assumed that the compliance costs associated with employee training and management familiarization would be incurred in the two-year period following the effective date of the final standard, and that other one-time compliance costs would be incurred in the four-year period following the effective date of the final standard. Initial printer costs to facilitate color printing would also be incurred during the four-year period following the effective date of the final standard, but all other color-printing costs would occur subsequent to the four-year transition period on a recurring annual basis.

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Table VI-4.
Annualized Costs of Compliance

NAICS Code	Industry	Cost of Reclassification and Revision of SDSs and Labels	Management Familiarization and Other Costs	Cost of Training Employees	Additional Label Printing Costs	Total Annualized Costs
11	**Agriculture, Forestry, Fishing & Hunting**					
113	Forestry & Logging	$0	$93,551	$65,009	$0	$158,560
114	Fishing, Hunting and Trappinig	$0	$8,438	$6,320	$0	$14,758
115	Support Activities for Ag & Forestry	$0	$41,762	$35,066	$0	$76,828
211	**Oil and Gas Extraction**					
211111	Crude petroleum & natural gas extraction	$1,548,450	$309,208	$226,235	$254,118	$2,338,011
211112	Natural gas liquid extraction	$69,081	$7,743	$17,271	$1,127,047	$1,221,142
212	Mining (except Oil & Gas)	$0	$81,170	$261,843	$0	$343,013
213	Support Activities for Mining	$0	$96,086	$305,787	$0	$401,872
22	**Utilities**					
2211	Electric Power Gen, Trans & Distrib	$0	$374,809	$800,570	$0	$1,175,379
2212	Natural Gas Distribution	$0	$105,791	$85,604	$0	$191,395
2213	Water, Sewage, & Other Systems	$0	$197,830	$72,397	$0	$270,227
23	**Construction**					
236	Construction of Buildings	$0	$2,550,505	$2,801,770	$0	$5,352,275
237	Heavy Construction	$0	$450,057	$1,147,167	$0	$1,597,223
238	Special Trade Contractors	$0	$5,001,804	$6,819,043	$0	$11,820,847
31	**Manufacturing**					
311	Food Manufacturing	$0	$1,116,052	$2,733,685	$0	$3,849,737
312	Beverage &Tobacco Prod. Manuf.	$0	$168,097	$231,104	$0	$399,200
313	Textile Mills	$0	$136,365	$341,760	$0	$478,125
314	Textile Product Mills	$0	$305,029	$315,780	$0	$620,810
315	Apparel Manufacturing	$0	$493,665	$689,964	$0	$1,183,629
316	Leather & Allied Product Manufac.	$0	$63,087	$74,435	$0	$137,521
321	Wood Product Manufacturing	$0	$733,660	$1,080,826	$0	$1,814,486
322	Paper Manufacturing	$0	$198,334	$801,563	$0	$999,897
323	Printing and Related Support	$0	$1,493,924	$1,209,329	$0	$2,703,253
324	**Petroleum & Coal Prod. Manufac.**					
324110	Petroleum refineries	$315,750	$14,585	$94,309	$432,409	$857,053
324121	Asphalt paving mixture & block mfg	$1,559,277	$42,480	$29,818	$107,523	$1,739,097

Table VI-4.
Annualized Costs of Compliance (continued)

NAICS Code	Industry	Cost of Reclassification and Revision of SDSs and Labels	Management Familiarization and Other Costs	Cost of Training Employees	Additional Label Printing Costs	Total Annualized Costs
324	**Petroleum & Coal Prod. Manufac.**					
324122	Asphalt shingle & coating materials mfg	$234,057	$8,117	$20,954	$15,360	$278,488
324191	Petroleum lubricating oil & grease m	$8,744,161	$15,043	$14,167	$18,147	$8,791,518
324199	All other petroleum & coal products mfg	$83,129	$3,755	$5,960	$5,221	$98,065
325	**Chemical Manufacturing**					
325110	Petrochemical mfg	$46,818	$1,989	$9,922	$323,821	$382,550
325120	Industrial gas mfg	$44,487	$16,229	$687	$158,404	$219,808
325131	Inorganic dye & pigment mfg	$12,943	$4,566	$4,311	$64,207	$86,028
325132	Synthetic organic dye & pigment mfg	$42,591	$5,007	$7,137	$55,068	$109,803
325181	Alkalies & chlorine mfg	$5,851	$1,783	$0	$52,836	$60,470
325182	Carbon black mfg	$3,408	$1,118	$0	$19,910	$24,436
325188	All other basic inorganic chemical mfg	$219,073	$24,775	$63,624	$333,199	$640,670
325191	Gum & wood chemical mfg	$34,586	$2,942	$2,761	$133,833	$174,122
325192	Cyclic crude & intermediate mfg	$4,716	$1,628	$7,217	$8,615	$22,176
325193	Ethyl alcohol mfg	$68,273	$11,841	$11,163	$278,487	$369,765
325199	All other basic organic chemical mfg	$335,937	$30,244	$96,228	$793,726	$1,256,135
325211	Plastics material & resin mfg	$942,129	$34,079	$94,366	$143,198	$1,213,772
325212	Synthetic rubber mfg	$24,788	$7,315	$14,921	$18,210	$65,234
325221	Cellulosic organic fiber mfg	$561	$981	$4,501	$76,216	$82,260
325222	Noncellulosic organic fiber mfg	$0	$5,254	$33,643	$0	$38,897
325311	Nitrogenous fertilizer mfg	$4,990	$8,438	$2,241	$120,893	$136,562
325312	Phosphatic fertilizer mfg	$1,145	$1,907	$1,197	$64,639	$68,888
325314	Fertilizer (mixing only) mfg	$71,741	$24,733	$14,096	$155,412	$265,983
325320	Pesticide & other agricultural chemical mfg	$92,279	$10,648	$14,600	$191,933	$309,460
325411	Medicinal & botanical mfg	$84,575	$17,665	$28,525	$228,557	$359,322
325412	Pharmaceutical preparation mfg	$235,425	$45,461	$166,099	$1,167,008	$1,613,993
325413	In-vitro diagnostic substance mfg	$322,022	$11,191	$25,137	$158,958	$517,308
325414	Biological product (except diagnostic) mfg	$46,741	$12,875	$33,625	$153,268	$246,509
325510	Paint & coating mfg	$1,139,199	$66,247	$46,523	$2,792,967	$4,044,937
325520	Adhesive mfg	$414,507	$27,659	$33,387	$1,093,695	$1,569,248

Table VI-4.
Annualized Costs of Compliance (continued)

NAICS Code	Industry	Cost of Reclassification and Revision of SDSs and Labels	Management Familiarization and Other Costs	Cost of Training Employees	Additional Label Printing Costs	Total Annualized Costs
325	**Chemical Manufacturing**					
325611	Soap & other detergent mfg	$270,712	$37,500	$36,787	$398,890	$743,889
325612	Polish & other sanitation good mfg	$179,507	$30,676	$23,955	$1,339,816	$1,573,954
325613	Surface active agent mfg	$79,967	$7,056	$6,898	$733,406	$827,327
325620	Toilet preparation mfg	$313,087	$43,619	$91,329	$3,762,580	$4,210,615
325910	Printing ink mfg	$568,423	$20,951	$16,743	$619,764	$1,225,882
325920	Explosives mfg	$25,266	$2,989	$10,190	$138,747	$177,192
325991	Custom compounding of purchased resin	$84,781	$29,558	$34,340	$40,378	$189,058
325992	Photographic film, paper, plate, & chemical mfg	$66,738	$23,911	$11,429	$1,576,301	$1,678,379
325998	All other miscellaneous chemical product & preparation mfg	$778,192	$62,095	$53,931	$2,029,737	$2,923,955
326	Plastics and Rubber Products Man.	$792,799	$597,068	$1,646,370	$910,738	$3,946,975
327	Nonmetallic Mineral Prod. Manufac.	$899,675	$656,755	$939,905	$694,713	$3,191,048
331	Primary Metal Manufacturing	$286,757	$231,398	$837,022	$302,411	$1,657,589
332	Fabricated Metal Prod. Manufac.	$0	$2,695,084	$2,932,637	$0	$5,627,722
333	Machinery Manufacturing	$0	$1,159,329	$1,761,288	$0	$2,920,617
334	Computer & Electronic Prod Man.	$0	$634,246	$1,156,476	$0	$1,790,722
335	Electric Equipment, Appliance Man.	$0	$266,332	$718,571	$0	$984,903
336	Transportation Equip. Manufacturing	$0	$607,390	$2,733,887	$0	$3,341,277
337	Furniture & Related Product Man.	$0	$992,072	$1,036,890	$0	$2,028,962
339	Miscellaneous Manufacturing	$1,368,364	$1,396,891	$1,136,333	$980,029	$4,881,617
42	**Wholesale Trade**					
423	Durable Goods	$0	$1,856,139	$1,774,386	$0	$3,630,525
424	Nondurable Goods	$0	$1,075,893	$1,135,948	$0	$2,211,842
42469	Other Chemicals & AlliedProducts	$0	$93,292	$67,218	$0	$160,510
4247	Petroleum & petroleum Products	$0	$87,299	$62,424	$0	$149,722
42495	Paint, Varnish, & Supplies	$0	$16,820	$12,344	$0	$29,164
44-45	**Retail Trade**					
441	Motor vehicle & parts dealers	$0	$1,305,535	$1,514,313	$0	$2,819,848
442	Furniture & home furnishings stores	$0	$359,469	$246,377	$0	$605,846

Table VI-4.
Annualized Costs of Compliance (continued)

NAICS Code	Industry	Cost of Reclassification and Revision of SDSs and Labels	Management Familiarization and Other Costs	Cost of Training Employees	Additional Label Printing Costs	Total Annualized Costs
44-45	**Retail Trade**					
443	Electronics & appliance stores	$0	$126,537	$87,754	$0	$214,291
444	Building material & garden equipment & supplies dealers	$0	$594,405	$449,187	$0	$1,043,592
445	Food & beverage stores	$0	$757,094	$628,686	$0	$1,385,780
446	Health & personal care stores	$0	$930,261	$1,176,208	$0	$2,106,469
447	Gasoline stations	$0	$571,479	$377,463	$0	$948,943
448	Clothing & clothing accessories stores	$0	$107,070	$73,802	$0	$180,872
451	Sporting goods, hobby, book, & music stores	$0	$147,142	$98,228	$0	$245,370
452	General merchandise stores	$0	$457,639	$388,312	$0	$845,951
453	Miscellaneous store retailers	$0	$289,925	$191,356	$0	$481,281
454	Nonstore retailers	$0	$234,565	$189,046	$0	$423,611
48-49	**Transportation & Warehousing**					
481	Air transportation	$0	$43,925	$113,775	$0	$157,700
483	Water transportation	$0	$20,684	$59,553	$0	$80,237
484	Truck transportation	$0	$861,427	$1,381,115	$0	$2,242,542
485	Transit & ground passenger transportation	$0	$92,278	$93,882	$0	$186,160
486	Pipeline transportation	$0	$30,080	$28,818	$0	$58,898
487	Scenic & sightseeing transportation	$0	$11,480	$9,626	$0	$21,106
488	Support activities for transportation	$0	$295,873	$434,291	$0	$730,164
492	Couriers & messengers	$0	$102,552	$375,406	$0	$477,958
493	Warehousing & storage	$0	$85,947	$624,857	$0	$710,804
51	**Information**					
511	Publishing industries	$0	$211,932	$276,389	$0	$488,321
512	Motion picture & sound recording industries	$0	$43,869	$30,110	$0	$73,979
515	Broadcasting (except Internet)	$0	$413,612	$218,390	$0	$632,002
516	Internet Publishing and Broadcasting	$0	$413,612	$254,170	$0	$667,782
517	Telecommunications	$0	$72,968	$37,505	$0	$110,474
518	Internet Service Providers, Web Search Portals, and Data Processing Services	$0	$72,968	$46,267	$0	$119,235
519	Other Information Services	$0	$72,968	$37,681	$0	$110,649

Table VI-4.
Annualized Costs of Compliance (continued)

NAICS Code	Industry	Cost of Reclassification and Revision of SDSs and Labels	Management Familiarization and Other Costs	Cost of Training Employees	Additional Label Printing Costs	Total Annualized Costs
52	**Finance & Insurance**					
521	Monetary authorities - central bank	$0	$687	$598	$0	$1,285
522	Credit intermediation & related activities	$0	$68,113	$45,885	$0	$113,998
523	Securities intermediation & related activities	$0	$25,202	$16,408	$0	$41,610
524	Insurance carriers & related activities	$0	$479,517	$316,850	$0	$796,367
525	Funds, trusts, & other financial vehicles	$0	$8,404	$5,527	$0	$13,931
53	**Real Estate & Rental and Leasing**					
531	Real estate	$0	$1,217,020	$943,304	$0	$2,160,324
532	Rental & leasing services	$0	$535,012	$392,423	$0	$927,435
533	Lessors of intangible assets, except copyrighted works	$0	$7,289	$5,308	$0	$12,597
54	**Professional, Technical & Technical**					
5411	Legal services	$0	$15,907	$10,682	$0	$26,589
5412	Accounting, tax return prep, bookkeeping, & payroll services	$0	$161,382	$109,248	$0	$270,631
5413	Architectural, engineering, & related services	$0	$289,947	$206,120	$0	$496,068
5414	Specialized design services	$0	$69,938	$49,915	$0	$119,853
5415	Computer systems design & related services	$0	$57,365	$39,741	$0	$97,106
5416	Management, scientific, & technical consulting services	$0	$223,220	$174,797	$0	$398,017
5417	Scientific R&D Serv.	$0	$73,126	$106,703	$0	$179,829
5418	Advertising & related services	$0	$125,140	$96,521	$0	$221,661
5419	Other professional, scientific, & technical services	$0	$814,550	$816,229	$0	$1,630,779
55	**Management of Companies**					
551111	Offices of bank holding companies	$0	$11,502	$7,655	$0	$19,157
551112	Offices of other holding companies	$0	$59,551	$46,736	$0	$106,287
551114	Corporate, subsidiary, & regional managing offices	0	$389,323	$604,961	0	$994,284
56	**Adm and Support & Waste Managmt**					
561	Administrative and Support Serv.	$0	$3,106,810	$7,448,349	$0	$10,555,159
562	Wastemanagement & Remediation Serv.	$0	$199,382	$386,503	$0	$585,885
61	**Educational Services**					
6111	Elementary & secondary schools	$0	$180,241	$170,120	$0	$350,361
6112	Junior colleges	$0	$8,033	$9,681	$0	$17,713

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Table VI-4.
Annualized Costs of Compliance (continued)

NAICS Code	Industry	Cost of Reclassification and Revision of SDSs and Labels	Management Familiarization and Other Costs	Cost of Training Employees	Additional Label Printing Costs	Total Annualized Costs
61	**Educational Services**					
6113	Colleges, universities, & profesional schools	$0	$31,127	$348,409	$0	$379,536
6114	Business schools, & computer & management training	$0	$3,211	$2,192	$0	$5,402
6115	Technical & trade schools	$0	$21,833	$16,341	$0	$38,174
6116	Other schools & instruction	$0	$24,312	$17,659	$0	$41,970
6117	Educational support services	$0	$11,255	$8,182	$0	$19,436
62	**Healthcare and Social Assistance**					
621	Ambulatory health care services	$0	$5,494,851	$9,889,378	$0	$15,384,229
622	Hospitals	$0	$85,271	$8,922,206	$0	$9,007,477
623	Nursing & residential care facilities	$0	$764,947	$4,571,756	$0	$5,336,703
624	Social assistance	$0	$1,149,425	$1,035,487	$0	$2,184,913
71	**Arts, Entertainment & Recreation**					
711	Performing arts, spectator sports, & related industries	$0	$90,960	$104,494	$0	$195,454
712	Museums, historical sites, & similar institutions	$0	$28,502	$29,422	$0	$57,925
713	Amusement, gambling, & recreation industries	$0	$399,676	$490,827	$0	$890,503
72	**Accommodation & Food Services**					
721	Accommodation	$0	$650,644	$1,255,780	$0	$1,906,424
722	Foodservices & drinking places	$0	$479,719	$329,616	$0	$809,336
81	**Other Services (except Public Adm.)**					
811	Repair & maintenance	$0	$2,627,056	$2,490,259	$0	$5,117,315
811121	Automotive body, paint, & interior repair & maintenance	$0	$186,989	$284,066	$0	$471,055
812	Personal & laundry services	$0	$1,554,430	$1,167,679	$0	$2,722,109
812320	Drycleaning & laundry services (except coin-operated)	$0	$231,568	$159,733	$0	$391,302
812921	Photofinishing laboratories (except one-hour)	$0	$28,333	$11,585	$0	$39,919
813	Religious/grantmaking/civic/professional & similar org	$0	$924,155	$663,723	$0	$1,587,877
99	**State and Local Government**					
9992	State Government	$0	$143,639	$484,520	$0	$628,158
9993	Local Government	$0	$120,037	$2,444,561	$0	$2,564,598
	Total	**$22,466,962**	**$59,017,784**	**$95,421,653**	**$24,074,395**	**$200,980,794**
	Total for firms producing SDSs	**$22,466,962**	**$3,912,723**	**$5,936,215**	**$24,074,395**	**$56,390,294**
	Total for firms not producing SDSs	**$0**	**$55,105,062**	**$89,485,438**	**$0**	**$144,590,500**

Note: Costs are expressed in 2010 dollars

Source: Office of Regulatory Analysis, OSHA based on PP&E (2009) and ERG (2012)

In the appendix to this cost section, Table VI–8 shows, by industry and by cost element, total non-annualized (non-discounted) compliance costs of about $2.1 billion estimated to be incurred during the four-year phase-in of the revisions to the HCS.

OSHA received numerous comments on additional costs that had not been considered as part of the PEA. OSHA has carefully evaluated those comments on costs and prepared the following responses.

Stakeholders were concerned about the costs associated with relabeling current inventory. Procter & Gamble reported that they felt ''the largest economic impact of GHS compliance to our business will be in the area of re-labeling'' (Document ID #0381) and numerous other commenters echoed those concerns (Document ID #0386, 0392, 0393, 0400, and 0402). OSHA anticipates that the four-year phase-in for the revisions to the OSHA HCS (increased from three years in the proposed rule) will provide adequate time for companies to deplete inventory and replace in-house containers that are labeled in accordance with the original OSHA HCS and therefore will mitigate any costs associated with relabeling in-house containers or products in inventory.

The Society of Chemical Manufacturers and Affiliates was concerned that OSHA had not considered the costs associated with mailing revised labels, stating that ''a large portion of label revisions will go via the mail service. If a chemical manufacturer produces 75 chemicals and has 50 customers at 70 cents a mailing, it could cost the company as much as $2625.00'' (Document ID #0402). The revisions to the HCS do not require that establishments mail revised labels to customers. Manufacturers are only required to provide products labeled in accordance with the GHS criteria by the effective date. OSHA did consider the costs associated with mailing updated SDSs and determined that manufacturers are currently providing updated paper or electronic SDSs to customers as they are revised and would not incur additional costs associated with this standard.

Some comments felt that OSHA had overlooked the time and costs associated with relabeling in-house containers with GHS compliant labels (Document ID #0378 and 0386). The phase-in period for the revisions to the HCS provides adequate time for firms to deplete products in inventory that are not labeled with GHS-compliant labels and to replace workplace containers or signs/permanent labels (such as regulated area signs) in the course of the normal cycle for wear-and-tear replacement. OSHA believes that any costs incurred that are outside the costs that would normally be incurred to replace in-house containers would be negligible and has not estimated a cost for this activity.

Some stakeholders anticipated costs associated with translating labels and SDSs into Spanish (Document ID #0381 and 0393). While some companies may find it necessary, based on customer demand, to provide products with labels and SDSs printed in Spanish, the revisions to the OSHA HCS do not contain any requirement for translating labels or SDSs into Spanish. OSHA has not taken costs related to translating labels and SDSs as part of this FEA.

OSHA received comment that firms will incur costs associated with managing multiple SDSs during the transition period. For example, the Society of Plastics Industry, Inc., reported that ''multiple suppliers of the same chemical [may] switch over to the GHS on different schedules'' and that ''additional time will be required for personnel to sort out and implement appropriate measures for managing this situation'' (Document ID #0392, 0402, 0415, and 0452). OSHA appreciates that there may be some time during the transition period where some SDSs are GHS-compliant while others are not. However, given the non-uniformity of SDSs currently circulating to firms, the Agency feels that users will already have a system in place for managing multiple SDSs for identical products and that no additional costs will be incurred as a result of the transition to new SDSs.

The U.S. Chamber of Commerce expressed concern that ''employers will also incur legal costs for counsel to review and analyze the revised SDSs to make sure the SDSs provide appropriate explanations and protection from liability'' (Document ID #0397). However, the final rule primarily changes the format of SDSs, and generally does not make substantial changes to the categories of information that must be included in the SDS. OSHA does not see why a new legal review to protect against tort liability would be necessary in such circumstances. In addition, the Agency believes that such legal costs would be relatively rare and not representative of the vast majority of employers. Furthermore, such legal costs as occur may simply be an alternative to other in-house professional review services that OSHA has already included in the costs. Finally, employers incurring such legal costs for SDS review arguably have been regularly incurring these costs under the existing HCS as part of periodic SDS changes; in that case, they are costs not attributable to this final rule.

The Society of Chemical Manufacturers and Affiliates felt that costs would be incurred because ''someone will have to inventory all of the MSDSs, make the required changes and then communicate those changes to customers and other affected personnel'' (Document ID #0402). The revisions to the OSHA HCS do not require manufacturers to provide new SDSs to customers who have purchased a product and received an SDS in the past. This final rule also includes a four-year phase-in period for firms to update their SDSs and requires only that those updated, GHS-compliant SDSs be provided to users who purchase a company's product after the effective date. OSHA realizes that some firms may choose to provide updated SDSs to past purchasers of their products, but the updates to the OSHA HCS do not require that they do so. Subsequently, OSHA has not taken any costs related to this activity.

Ferro Corporation's comment in the rulemaking record expressed concern that OSHA did not take into account conversion costs for ''MSDSs and labels for experimental products that are being resampled'' (Document ID #0363). OSHA's analysis does not make a distinction between commercial and experimental products, but it does not exclude costs associated with experimental products. The Agency feels that this economic analysis captures those costs as well as the transitional costs for products that are sold commercially.

The Society of Plastics Industry, Inc. expressed concern that the revisions to the OSHA HCS would require employers ''to perform new personal protective equipment (PPE) hazard assessments, select new PPE or select PPE for workers who did not previously use it'' or ''to add or modify ventilation systems or to have their employees use respiratory protection to address newly discovered hazards, and to implement respiratory protection programs'' (Document ID #0392). The scope of hazards covered by the GHS is very similar to what is covered by the current HCS as discussed in Section XIII Summary and Explanation. While the revisions to the OSHA HCS could, theoretically, result in some chemicals that were not considered hazardous being classified as such now, OSHA does not expect any significant change in chemicals covered under this final rule and did not receive any specific examples from stakeholders, despite

repeated requests for them. For this reason, OSHA has concluded that there will be no additional costs related to PPE for this standard.

Multiple stakeholders questioned whether OSHA had taken into account the cost to update workplace signs to come into compliance with the revised OSHA HCS. Southern Company reported that the cost to purchase signs for their 29 affected plants would be $58,000 plus the cost of employee time to install the signs (Document ID #0378), and API reported that one of its member companies recently updated the signs at its small refinery at a cost of $200,000 (Document ID #0376). OSHA feels that the four-year phase-in time for these revisions to the HCS, combined with the limited number of affected workplace signs, will minimize any cost that firms may incur. The phase-in period will allow firms to update their signs during the normal replacement lifecycle of three to five years for those signs and will result in minimal costs.

Commenters felt that ''costs for re-classification and modification of SDS and labels would need to include substantial consulting fees'' (Document ID #0392). OSHA maintains that any firm preparing labels and SDSs under the current OSHA HCS will not find it significantly burdensome to prepare labels and SDSs under the revised HCS. On the contrary, OSHA expects that the revisions to the HCS would be able to prepare SDSs and labels at lower cost in the future (for which the Agency earlier, in Section VI.D: Benefits, estimated productivity savings). In addition, much reclassification work has already been done by firms that sell to the EU or to Asian markets.

Estimation of Compliance Costs

The remainder of this section explains how the compliance costs arising from the final rule were calculated by describing the data and methodology used to estimate each of the major cost elements. A more complete and detailed description of the estimation of compliance costs can be found in the revised final version of the PP&E 2009 report (Document ID #0273), the ERG (2010, 2011) reports focusing on the costs of printing labels in color, and the updated cost estimates for the final rule in ERG (2012).

The major elements of the revisions to the HCS that involve compliance costs include (1) the classification of chemicals in accordance with the GHS criteria, and the revisions to the safety data sheets and labels corresponding to the affected hazardous chemicals; (2) even though it is not directly a result of any specific requirement included in the revisions to the HCS, the cost for managers and administrators of hazard communication programs to become familiar with the revisions to the standard and to manage, update, and revise their programs as may be necessary to ensure compliance with the revised standard; (3) incremental training for employees already trained under the existing OSHA hazard communication programs to ensure their familiarization with the new formats, information, and symbols that would be introduced into the workplace as a result of the revisions to the HCS; and (4) costs to upgrade label printing technology or purchase labels preprinted in multiple colors in order to comply with the requirement that the pictogram on the label be enclosed in a red-bordered diamond.

The estimated compliance costs presented in this analysis of the revisions to the HCS are largely based on research conducted by PP&E (2009), which was expanded and updated for the FEA by ERG (2010, 2011, and 2012). Both PP&E and ERG performed this research under contract to the Department of Labor specifically for the purpose of developing estimates of compliance costs for, and assessing the potential impacts that may be associated with, revisions to the OSHA HCS in order to implement the GHS.

The estimated costs of compliance with many of the provisions of the final rule involve wages paid for the labor hours required to fulfill the requirements. In some cases, compliance could be achieved by purchasing services or products in lieu of paying employees directly. The estimated compliance costs are intended to capture the resources required for compliance, regardless of how individual establishments may choose to achieve compliance.

Costs Associated With Chemical Classifications and Revisions to Safety Data Sheets and Labels

The revisions to the OSHA HCS continue to require firms that sell hazardous chemicals to employers to provide information about the associated hazards. Information is required to be presented in a safety data sheet (SDS) in the format specified in the revised standard, and some information is also required to be presented on product labels.

The existing OSHA HCS already requires information about hazardous chemicals to be provided in SDSs and on labels. In addition, under the existing standard, SDSs are to be revised within three months after a manufacturer or employer becomes aware of any significant new information about a chemical hazard.

The final rule requires chemicals to be classified into the appropriate hazard classes and categories based on the information about the chemicals that the manufacturers currently have. This information would have been assembled for purposes of conducting a hazard determination under the current HCS. In addition, the current HCS requires chemical manufacturers and importers to remain aware of developments regarding the hazards of the chemicals they produce or import in order to update the labels and SDSs for the chemicals in a timely manner. The classification of the chemicals into the hazard classes and categories under the revised provisions does not require any additional testing, studies, or research to be conducted. Manufacturers would be able to rely on the information they already have in determining how to properly classify their chemicals.

Generally, chemical manufacturers and importers periodically review, revise, and update SDSs and labels. Changes are made as necessary as information regarding specific hazards develops, new information about protective measures is ascertained, or changes are made to product information and marketing materials. Labels and SDSs must also be produced or modified when products are introduced or changed. Therefore, there is a regular cycle of change for these documents for a variety of reasons. The final rule may require more extensive change than would normally occur, but the phase-in period is such that the chemical manufacturers and importers can take advantage of the normal cycle of change to phase in the revisions for all their products over a reasonable time period. This should have less impact on normal operations than a short time period that would require all SDSs and labels to be revised at the same time.

The transition period that would be allowed by the delayed effective date for the requirement to adopt the new format should help ensure that the transition can be completed in conjunction with revisions and updates that would normally be expected to occur even without the implementation of the final rule. In addition, the format for SDSs required by the final rule is consistent with the format adopted by the American National Standards Institute (ANSI) and therefore has already been implemented by many of the affected businesses.

Based on ERG (2012), OSHA developed estimates of the costs that would be associated with the

classification of chemicals in accordance with the final rule and with the revisions to the corresponding SDSs and labels for those chemicals. The estimated compliance costs represent the incremental costs that would be incurred to achieve compliance with the final rule. These estimated costs would be in addition to the costs that would already be incurred to continue to remain in compliance with applicable requirements of the existing HCS.

The revisions to the HCS would allow for a transition period of four years following the publication of a final rule. During this period, even in the absence of any pertinent OSHA rulemaking, producers of affected chemicals would presumably be ensuring that the information provided in their SDSs and labels remains accurate and current. Producers of hazardous chemicals are generally expected to regularly review the available information regarding any hazards that may be associated with their products and to revise SDSs and labels accordingly.

In addition, for every affected product that is newly created, reformulated, mixed with new ingredients, modified with new or different types of additives, or has any changes made in the proportions of the ingredients used, the chemical producer would be required under existing OSHA and other applicable standards to review the available hazard information, to classify the chemical in accordance with applicable hazard criteria, and to develop corresponding SDSs and labels.

The estimated costs of compliance with the final rule do not include the costs associated with activities such as those described in the above paragraphs, but rather reflect only the additional costs that chemical producers would not already be expected to incur.

The estimated compliance costs associated with the reclassification of hazards and changes to SDSs and labels are directly related to the numbers of SDSs affected. Based on ERG (2012), OSHA developed estimates of the number of potentially affected SDSs by industry, for each of the industries producing the corresponding chemicals and products (as shown in Table VI–3). Downstream users, distributors, and wholesalers are generally expected to continue to rely on SDSs provided by manufacturers to fulfill their obligations under the OSHA standard, as has been the practice for decades.

The costs of compliance associated with the classification of chemicals in accordance with the criteria specified in the final rule and with the revisions to the corresponding SDSs and labels for those chemicals were based on PP&E industry interviews and, as described below, are based on the same time and software estimates as those presented in the proposed rule.

Generally, for smaller establishments with relatively few chemicals affected, OSHA estimated the incremental compliance costs to be the equivalent of the cost of seven hours of time of a professional with the requisite expertise for each affected chemical, on average. Based on ERG's (2012) updates to the PP&E 2009 report (Document ID #0273), OSHA estimated the cost of hourly compensation for a professional for this purpose to be $66. As a result, a small establishment (with fewer than 100 employees) with 20 SDSs for 20 chemicals, for example, would have estimated incremental compliance costs of $9,240 (7 hours times 20 SDSs times $66).

In larger establishments with more affected chemicals, the incremental compliance costs were estimated to consist of two parts. First, labor costs were estimated according to the size of the establishment. OSHA, based on PP&E interviews with stakeholders, estimated that entities with 100 to 499 employees would incur, on average, the equivalent of five hours of time of a professional with the requisite expertise for each affected chemical, and that entities with 500 or more employees would incur the equivalent of three hours of professional time per chemical. Again, OSHA estimated the hourly compensation for a professional for this purpose to be $66.

The rulemaking record presented a wide range of estimates for the time required to update SDSs with a low estimate of four hours per SDS (Document ID #0119 and 0123), a few estimates in the range of 25–30 hours per SDS (Document ID #0134 and 0402), and upper bound estimates as high as 150 hours per SDS (Document ID #0341). OSHA evaluated these estimates and felt that the upper estimates are not defensible for the following reasons: (1) Firms will not be required to gather or evaluate additional data; (2) firms currently must update their SDSs periodically, and there was no evidence presented in the record that suggested that updates under the current HCS take anywhere near 150 hours per SDS; and (3) the Agency does not feel that it is clear that these estimates account for only the incremental time needed to prepare an updated SDS, taking into account any time that would be spent updating SDSs during the transition period in the absence of any revisions to the OSHA HCS. The Agency acknowledges that some SDS updates may take longer than the average listed above, but also feels that many chemicals—especially pure substances which will likely already have been classified according to the GHS for the EU or Asian markets—will take less than the estimated time used in the economic analysis. Therefore, OSHA feels that the estimated time to update SDSs used in this analysis represents a reasonable average for most chemicals.

The labor cost per SDS was estimated to be lower for larger companies based on the determination that larger companies produce more SDSs, and would therefore experience efficiencies associated with producing them. These efficiencies include economies of scale, the use of software specifically designed to classify hazards and produce SDSs, and the generally lower cost per SDS associated with many mixtures.

In addition to labor costs, many of these larger establishments may incur additional expenditures to purchase or modify software that can be used to classify chemicals and to produce corresponding SDSs and labels. Such software is available from a variety of vendors; the software can be purchased or used on a subscription basis. Publicly available information about the products and services being offered and sold to businesses for purposes of complying with hazard communication requirements indicates that most of the relevant vendors are aware of and prepared for an upcoming alignment with the GHS. Therefore, their products and services are or will be adapted to enable compliance with the revisions to the HCS. In addition, some firms may purchase custom or proprietary software from private vendors to achieve compliance with existing requirements or future revisions to hazard communication requirements or for other purposes.

Regardless of the particular approach individual companies may choose to most efficiently fulfill their obligations under the existing HCS, OSHA expects that a part of the costs associated with achieving compliance with the final rule would involve costs attributable to software modifications. Based on industry data obtained by PP&E, OSHA apportioned these costs on a per-SDS basis and estimated the cost per SDS to be $208, on average. Numerous stakeholders raised the issue of software updates and modifications in their comments submitted to the rulemaking record (Document ID #0018, 0105, 0114, 0363, 0371, and 0389). In response to the ANPR, the American Chemistry Council reported that their members estimated anticipated software update and conversion costs of up to $70,000. The ACC also reported that their

members typically have hundreds, if not thousands, of SDSs (Document ID #0105). Using OSHA's per-SDS cost of $208, a firm that produced 336 SDSs (which would fall within the typical range for ACC members) could expect to incur costs of $70,000. This example suggests that OSHA's estimated cost-per-SDS is a reasonable one.

Based on ERG's (2012) updates to the PP&E 2009 report (Document ID #0273), OSHA estimated the numbers of SDSs produced in each industry that would potentially need to be revised under the final rule. As shown in Table VI–3, a total of about 1.4 million SDSs, one for each type of chemical produced by an individual manufacturer in the United States, were estimated to be in potential need of revision.

In developing estimates of the compliance costs associated with the rule, PP&E also considered the extent to which many firms have already performed the necessary reclassifications of chemical hazards and revisions to SDSs. Some chemical hazards have already been reclassified as would be required by the OSHA final rule because the U.S. Department of Transportation has required such classifications as part of their regulations for the transportation of hazardous chemicals (49 CFR Parts 171–180). The criteria for physical hazard classifications for purposes of transport have been internationally harmonized for some years, and these criteria formed the basis for the physical hazard criteria in the GHS. Therefore, many products intended for transport have already been classified under the new physical hazard criteria as well as the existing criteria in the HCS.

Many current SDSs are already produced to varying degrees in accordance with the requirements of the OSHA final rule because the widely followed ANSI industry consensus standard already reflects many of these requirements in its relevant criteria. In addition, many firms have implemented or are beginning to implement hazard reclassifications, SDS revisions, software modifications, and other changes in accordance with the requirements of the final rule, because these provisions are generally anticipated to be adopted as part of the implementation of the GHS in countries and regions around the world. Since some other countries are already implementing the GHS, companies in the U.S. that ship to those countries are already having to comply with the GHS for products being exported. Stakeholder comment in the docket suggested that some of the work related to reclassification has already been done (*e.g.,* Document ID #0352, 0377, 0405, and 0410), lending support to OSHA's baseline estimates of current compliance rates.

Research conducted by PP&E indicates that all of these factors contribute to a substantial degree of current compliance with the requirements of the final rule, even if the existing OSHA HCS standard remains unchanged.[23] Based on the ERG (2012) updates to the PP&E (2009) report (Document ID #0273), OSHA estimates that, on average, about 53 percent of the gross costs that would otherwise be associated with the revisions to the HCS have already been incurred by firms. However, this average is a result of very different levels of current compliance for different sizes of firms. PP&E estimated that the percentage of firms in current compliance with the final rule—with the exception of employee training—is 75 percent for firms with over 500 employees; 25 percent for firms with 100 to 500 employees; 5 percent for firms with 20 to 99 employees; and 1 percent for firms with fewer than 20 employees. OSHA used these percentages to reduce the number of affected firms reported in Table VI–3, for purposes of estimating the costs for affected firms to comply with the final rule (again, with the exception of employee training).

Based on the preceding analysis, OSHA estimates an annualized cost of approximately $22.5 million for the classification of chemicals in accordance with the criteria specified in the final rule and for revisions to the corresponding SDSs and labels for those chemicals.[24]

As discussed below, OSHA received some comments from the public regarding the estimated costs associated with chemical classifications and revisions to safety data sheets in response to the ANPR published by OSHA in the **Federal Register** on September 12, 2006 (71 FR 53617) and the Proposed Rulemaking published by OSHA in the **Federal Register** on September 30, 2009 (74 FR 50280). The comments received are publicly available as part of the rulemaking record, accessible through regulations.gov, in docket OSHA–H022K–2006–0062. Relevant information submitted by the public was incorporated into the development of the methodology and estimates presented in this economic analysis.

Some commenters provided examples of cost estimates that generally support the estimates of the preliminary economic analysis. Information from other commenters provided a wide range of cost estimates. The figures presented in some comments appeared to correspond to gross costs of creating SDSs, and in other cases it was not clear whether gross or incremental costs were being presented. In general, commenters did not provide the rationale underlying their cost estimates.

Comment from the Fragrance Materials Association of the United States (Document ID #0061) and the Flavor and Extract Manufacturers Association of the United States (Document ID #0062) stated that these Associations' best assessment is that it would take anywhere from two to eight hours to review information and prepare new labels and safety data sheets for each hazardous chemical

One company that produces and distributes about 4,000 different hazardous chemicals estimated that it will take four to six hours per product to prepare a GHS SDS. (Document ID #0026).

The National Paint and Coatings Association stated that it would take approximately five hours to research the information for a product SDS/label at a small company, at a cost of about $300 per product; it also estimated that, at a medium-sized company, this same task would take from 3–5 days to 3 weeks at a cost of approximately $1,000 to $1,800, and that at a larger company, the task would be even more expensive (Document ID #0050).

The National Association of Chemical Distributors estimated that converting an existing SDS to the new GHS format would require about 150 hours as

[23] By current compliance, OSHA means firms that have already reclassified chemicals and prepared SDSs and labels in accordance with GHS requirements specified in the final rule and would therefore be ready to introduce these modifications at negligible additional cost when GHS becomes effective.

[24] This annualized estimate of $22.5 million reflects software costs of $55 million and labor costs of $226 million, both multiplied by 0.079932 to annualize these costs (incurred over the first four years) over a 20-year period. The $55 million in software costs is the result of about 264,000 modified SDSs [(929,000 SDSs for large establishments × 25% not in existing compliance × 95% requiring modification) + (233,000 SDSs for establishments with 100–500 employees × 75% not in existing compliance × 25% requiring modification)] at a cost of $208 per SDS. The $226 million in labor cost is the result of about 666,000 affected SDSs multiplied by an average of 5.14 hours of professional time per SDS (from 3 to 7 hours per SDS) multiplied by $66 per hour. The annualization factor, 0.079932, is equal to:

$[(1/4) * [(1-(1.07)^{-4})/0.07] * [0.07/((1-(1.07)^{-20})]$,

where the first term in brackets reflects the fact that these costs are assumed to be spread equally over the first four years; the second term in brackets calculates the present value of the costs, and the third term in brackets annualizes the present value of the costs over a 20-year period.

compared to about 100 hours currently to revise an MSDS (Document ID #0060 and 0341).

Another commenter, Merck, which produces, imports, or distributes about 500 hazardous chemicals annually, estimated that, on average, it takes approximately 3 weeks to generate a single safety data sheet at an average cost of $1,500. Merck also stated that with a sufficient transition period of three to six years, the costs of moving to GHS would be minimal. Merck noted that the time and cost for additional changes to the GHS format should be minimal because it had already converted its SDSs to the 16-section ANSI/GHS format several years ago (Document ID #0072).

One trade association estimated that the costs associated with revising SDSs and labels for the 1,600 firms in the cleaning product formulator industry would total $575 million, not including the time needed to review changes to hazard classifications. The total numbers of SDSs per establishment are generally higher for the establishments represented by the trade association than the OSHA estimates for the industry category as a whole (Document ID #0032).

This trade association also provided some of the details underlying its cost estimates for individual companies. Cost estimates provided by the trade association for individual companies included costs per SDS as low as $30 and $80, and as high as $600 or more. One company (identified as Company #11) estimated the cost to revise the label and SDS would be $120 per product; another company (Company #2) estimated that this cost would be $2,600 per product. Some of the higher compliance cost estimates appear to be unrealistically high; for example, the estimated costs associated only with revising labels for company #3 appear to represent about 3 percent of total annual sales. While acknowledging that some firms may incur higher costs than others to revise SDSs and labels, these data generally appear to support that, at least for several firms in the industry, the costs minimally necessary to achieve compliance would be close to or less than the costs estimated by OSHA.

Ameren, an electric and gas services provider, estimated that all 9,000 of their employees would need one hour of training initially at a total cost of $450,000. The company estimated that it would take 100 hours to update their SDSs (fewer than 25) at a total cost of $6,500 and that updating the 25,000 SDSs in their database would take five minutes per SDS for a total cost of $102,700 (Document ID #0330).

The Independent Lubricant Manufacturers Association surveyed their members and reported that, with one SDS per product, their members could be expected to incur costs of $340,000 to $559,000 ($329 or $200 per SDS multiplied by 1700 SDSs per firm) to update SDSs. One member company estimated costs associated with update software at $200,000 in the first year and $1,000 per SDS in subsequent years to maintain the software and SDSs. Another company estimated that software would cost $50,000 and would include an additional $300,000 in staff time (Document ID #0371).

Another trade organization, The Society of Chemical Manufacturers and Affiliates, felt that it would take ten hours to revise a label or an SDS (Document ID #0402).

Several other commenters provided cost estimates related to the adoption of GHS requirements for chemical classifications and revisions to safety data sheets and labels. (*See,* for example, Document ID #0015, 0018, 0024, 0036, 0079, 0105, 0107, 0116, 0128, 0141, 0145, 0327, 0341, and 0377, among others.) Many estimates are broadly consistent with OSHA's estimates; in addition, some estimates appear to be similar to, but may actually be substantially lower than, OSHA's estimates to the extent they include costs attributable to the existing standard rather than just the incremental costs associated with the revisions to the HCS. Other estimates are substantially higher, but many of these also appear to represent gross costs associated with fulfilling hazard communication requirements without consideration of the incremental nature of the compliance costs for the revisions to the HCS, as discussed above.

Management Familiarization and Other Management-Related Costs

The implementation of GHS as part of the OSHA HCS would require that employees currently covered by the standard become familiar with the new system. The nature and extent of the familiarization required would vary depending on an employee's job and business. OSHA considered separately various training needs that may be imposed by the revisions.

Although it would not be explicitly required by the final rule, some establishments may choose to provide training to managers and other employees that are not directly covered by the training requirements of the HCS. Other management-related costs may include making revisions, if necessary, to existing hazard communication programs; promoting awareness of and providing information about the revisions to hazard communication programs; coordinating and integrating changes to hazard communication programs with other programs, processes, and functions; serving as an in-house resource for supporting the general adoption of the revised HCS; creating supplemental capacity for providing training and assistance to affected employees; and other ancillary costs for company-specific changes and general hazard communication program administration that may be incurred at some establishments.

These management costs could be considered discretionary since they are not explicitly required by the regulatory provisions. However, OSHA recognizes that these costs may be incurred in practice due to the manner in which some companies have implemented and integrated hazard communication programs in their facilities. These costs reflect the fact that hazard communications programs often are not implemented solely for purposes of complying with the OSHA standard, but may serve a variety of other purposes that are part of and that benefit the overall production process.

In some cases, health and safety supervisors, logistics personnel, and other personnel involved in administering, implementing, and ensuring compliance with the requirements of the HCS in affected establishments would be expected by company managers to become familiar with the revisions to the HCS. The responsibilities of these employees may include modifying written hazard communication programs as necessary, reviewing and preparing training materials, and training new and existing employees regarding the changes. A commenter asserted that OSHA had overlooked the cost to train the employees who would be providing training to production workers (Document ID #0392), and the American Chemistry Council also questioned whether OSHA had considered the necessary training for fire, EMS, or other emergency workers (Document ID #0393). The Agency has included these occupations in the cost estimates, allocating eight hours for training on the revised HCS elements, and included employees responsible for providing training as part of the management training and familiarization costs and has continued to include them in estimated the costs of the rule for this FEA.

In the PEA, OSHA estimated 8 hours of time, or an equivalent cost, would be associated with the necessary familiarization and implementation of

revisions to hazard communication programs in affected establishments in the manufacturing sector. Comments received on the topic of management familiarization yielded a wide range of time needed for this task. Some estimates were what OSHA considers to be unreasonably high (ranging from 16 to 56 hours (Document ID #0372)) and may not represent incremental costs only. OSHA did receive a comment that ''eight hours * * * [may be enough to gain] a basic understanding'' of the revisions to the OSHA HCS but went on to say that ''as much as a week * * * [may be needed to gain an] understanding of the details'' (Document ID #0392). OSHA believes that under the current HCS, managers spend some time each year reviewing and updating their hazard communication program. So, while a manager may spend more than 8 hours total reviewing and familiarizing themselves with the revised HCS, a portion of that time would not fall under new costs resulting from the promulgation of the rule. OSHA did not feel that commenters presented a strong case for changing the estimate of incremental time needed for familiarization with the revised HCS and has therefore maintained the estimate of 8 hours.

In many potentially affected establishments that do not produce SDSs, and that have few affected chemicals or few affected employees, a very basic hazard communication program may achieve compliance with the OSHA standard. For these establishments, outside of the manufacturing sector, that have a health and safety supervisor, the incremental management and administrative costs associated with the revisions to the OSHA standard were estimated to be two hours per establishment. For establishments outside of the manufacturing sector that do not have a health and safety supervisor, OSHA estimated that these costs would be negligible.

Based on the preceding analysis, OSHA estimates an annualized cost of approximately $59 million for management familiarization and other related management activities in response to GHS.[25]

Costs Associated With Training Employees

Production employees who are currently covered by and trained under the provisions of the existing HCS would need to receive some additional training to become familiar with the changes to SDSs and labels.

In many potentially affected establishments that do not produce SDSs, and that have few affected chemicals or few affected employees, a very basic hazard communication program may achieve compliance with the OSHA final rule. In these establishments, the incremental employee training costs associated with the revisions to the HCS may be relatively small. In other cases, employers may be able to integrate the necessary training into existing training programs and other methods of distributing safety and health information to employees, and thus may not incur much additional cost. Nevertheless, in general, employers will need to devote real time and resources to provide the necessary training in order to ensure that workers are familiar with the new hazard communication system.

In response to comments in the rulemaking record, the training time associated with the revisions to the OSHA HCS has been increased from those presented in the PEA. OSHA increased the estimated training time from 30 minutes to 60 minutes for most employees; from 15 minutes to 30 minutes for employees with minimal contact with hazardous chemicals; and from 5 to 10 minutes for employees in certain occupations in the transportation sector, where GHS pictograms are already in use. A complete occupation-by-occupation summary of OSHA's estimates is provided in the ERG (2012) revisions to the PP&E (2009) report.

The United Parcel Service, Inc. submitted comment supporting this increase, reporting that ''[i]nitial training takes about 15 minutes currently but will [* * *] double during the phase-in process'' and that ''training time (½ hr) will double to one hour [* * *] for employees who are 'users' '' (Document ID #0369). Other stakeholders also felt that training time was underestimated (Document ID #0330, 0345, 0347, 0363, 0392, 0397, 0400, 0402, 0404, and 0440), with the estimates of additional time needed over and above OSHA's estimates ranging from 15 minutes (Document ID #0330, 0369, and 0378) to 15 hours (Document ID #0400). OSHA's increase of training time by 100 percent over the estimated training time in the PEA represents a significant increase in response to comments, and the Agency believes that these estimates of training times are reasonable. The extra time OSHA has incorporated also addresses concerns of some stakeholders that firms will have to offer two iterations of training —one before the two-year familiarization deadline set forth in the regulatory text, and one closer to the effective date when all products have been converted to GHS-compliant SDSs and labels (Document ID #0339). However, for costing purposes, all training costs for workers to become familiar with GHS requirements were assumed to be incurred within the first two years after the effective date of the final rule. OSHA received comment that additional training time would be required to train employees responsible for reclassifying chemicals under the revised HCS (Document ID #0392). OSHA believes that the changes to the HCS are such that an employer who was capable of classifying chemical hazards under the current HCS would be able to become familiar with the GHS criteria in a relatively short period of time. The Agency has also allocated 3 to 7 hours per product to complete the reclassification and produce an updated SDS, which should allow for additional familiarization time if necessary. OSHA has not included additional training time for training on new hazards disclosed as a part of the transition. This concern was raised by a commenter (Document ID #0339), because it is theoretically possible that some chemicals could be classified with new hazards through the GHS classification schemes that were not previously presented in the workplace. However, the data used for classification is the same used for the current hazard determination, and OSHA believes that few new hazards would actually be introduced through this process. Compliance with the final rule is not expected to impose any additional training costs after the transition period.

[25] This annualized estimate of $59 million reflects total costs of $692 million multiplied by 0.085332 to annualize these costs (incurred over the first two years) over a 20-year period. The $692 million is equal to $6 million for health and safety managers (7,070 affected managers × $1039 per manager (the estimated cost of one day training per manager) × 83% not currently in compliance) plus $15 million for logistics personnel in manufacturing (49,100 affected logistics persons × 8 hours × $66 per hour × 83% not currently in compliance) plus $163 million for health and safety supervisors in manufacturing (370,000 affected health and safety supervisors in manufacturing × 8 hours × $66 per hour × 83% not currently in compliance) plus $508 million for health and safety supervisors in non-manufacturing (3,848,000 affected H&S supervisors in non-manufacturing × 2 hours × $66 per hour × 100% not currently in compliance).

The annualization factor, 0.085332, is equal to:

$[(½] * [(1-(1.07)^{-2})/0.07] * [0.07/((1-(1.07)^{-20})]$,

where the first term in brackets reflects the fact that these costs are assumed to be spread equally over the first two years; the second term in brackets calculates the present value of the costs, and the third term in brackets annualizes the present value of the costs over a 20-year period.

Based on the preceding analysis, OSHA estimates that the annualized cost of training employees in response to GHS would be approximately $95.4 million.[26]

The revisions to the HCS may result in reductions in the costs associated with providing training for employees as required by the existing OSHA HCS. Affected companies could save considerable time and effort in training new employees in the future. The savings may be attributable in part to reducing or eliminating the need to explain the different types of formats used to convey hazard information and the different types of information included in the contents of SDSs and labels. OSHA did not quantify these potential savings in training costs as part of this FEA but, based on stakeholder comment and testimony in the rulemaking record, OSHA anticipates that companies will realize cost savings in future time periods from simplified hazard communication training facilitated by the final rule. A qualitative discussion of these cost savings was presented in Section VI.D: Benefits in this preamble and an estimate of the possible magnitude of these cost savings is presented in the sensitivity analysis in Section VI.L in this preamble.

Cost of Color Printing

The revisions to OSHA's HCS include a requirement that labels include a pictogram enclosed in a red-bordered diamond. The rulemaking record showed widespread (although not unanimous) support for requiring the red-bordered diamond. One commenter felt that ''the use of color to draw attention to a potential hazard is a useful tool and is likely to enhance the communication of safety information'' (Document ID #0327), another stated that ''the color red has been universally accepted as indicating a potential danger or hazard'' (Document ID #0339), and others showed general support for requiring red borders in order to achieve the highest level of harmonization (Document ID #0351 and 0383). Many stakeholders raised concerns that this requirement would result in additional costs to firms since many do not currently print labels in multiple colors or purchase pre-printed labels in multiple colors (Document ID #0120, 0327, 0328, 0344, 0363, 0383, 0389, and 0402). Requiring the red-bordered diamond on the label would mean that some firms would have to upgrade their printer technology or purchase more expensive pre-printed label stock that included the red-bordered diamond.

OSHA estimated the cost impacts of the rule's requirement that pictogram borders be printed in red based on a report on the subject prepared by ERG (2011). That report is based on data provided in an earlier report prepared by ERG (2010). The full ERG reports are available in the rulemaking docket on regulations.gov. To estimate costs for this provision, OSHA estimated the number of hazard labels printed per year, the number of establishments that would incur costs to upgrade their printing technology, and the cost to those establishments to upgrade their printing technology. OSHA estimates that approximately 949 million hazard labels are printed each year and the total incremental cost for establishments to comply with this provision of the OSHA standard is $24.1 million per year. The following section explains how OSHA, using ERG (2010 and 2011), developed estimates of the number of hazard labels printed per establishment, the number of establishments that would need to upgrade printer technology, and the cost to those establishments to comply with this provision of the final rule.

ERG (2011) used data on *Shipment Characteristics by Commodity by Shipment Weight* from the U.S. Census Bureau[27] and DOT's jointly produced Commodity Flow Survey (CFS) (U.S. Census Bureau, 2007).[28] Commodity shipments reported in this survey were classified using the Standard Classification of Transported Goods (SCTG) commodity codes,[29] which ERG mapped to the relevant NAICS industries.

For each of the SCTG commodity codes, the U.S. Census data present shipments of basic chemicals by shipment weight. In order to establish the types of shipments that might fall into each weight class, OSHA relied on preliminary research conducted by ERG (2010) on the weight and capacity of various shipping container units and the weight per gallon of various chemicals. Information was gathered on the types of containers typically used by specific industries and whether those containers would typically ship inside a labeled exterior container. OSHA calculated shipment weights for various chemicals shipped in various container types by multiplying the product weight per gallon by container capacity and adding the weight of the shipping container. As shown in Table VI–5, minimum, maximum, and simple average weights per full container were estimated for the different commodities evaluated in this test case using the Census-reported commodity shipments by shipment weight to establish some bounds on possible shipment types.

[26] This annualized estimate of $95.4 million reflects total costs of $1,118 million multiplied by 0.085332 to annualize these costs (for costing purposes, assumed to be entirely incurred over the first two years) over a 20-year period. The $1,118 million is equal to $785 million in employee hours to receive training (43.8 million affected employees × 0.84 hours × $21 per hour) plus $333 million in management hours to provide the training (6.0 million training sessions × 0.84 hours × $66 per hour). The 0.84 hours is the average estimated training time for all affected employees, with most receiving 60 minutes of training, some receiving 30 minutes of training, and a very few receiving 10 minutes of training. The total number of managers providing training (3.8 million) would, on average, be equal to approximately 8.7 percent of the number of employees receiving training in response to GHS.

[27] U.S. Census Bureau, 2007. Commodity Flow Survey: Shipment Characteristics by Commodity by Shipment Weight. Available at *http://www.bts.gov/publications/commodity_flow_survey/*.

[28] U.S. Census Bureau, 2007a. American Fact Finder: Commodity Flow Survey. Available at *http://www.census.gov/econ/census07/index.html*.

[29] The following 13 commodity codes were considered as those that would potentially contain hazardous chemicals: Alcoholic Beverages (Commodity code 8), Gasoline, including Aviation (Commodity code 17), Fuel Oils (Commodity code 18), Other Coal and Petroleum Products (Commodity code 19), Basic Chemicals (Commodity code 20), Pharmaceutical Products (Commodity code 21), Fertilizers (Commodity code 22), Other Chemical Products & Preparations (Commodity code 23), Plastics and rubber (Commodity code 24), Pulp, newsprint, paper, and paperboard (Commodity code 27), Nonmetallic mineral products (Commodity code 31), Base Metal in Primary or Semi-Finished Forms and in Finished Basic Shapes (Commodity code 32), and Miscellaneous Manufactured Products (Commodity code 40).

Table VI-5. Chemical Container Estimated Typical Shipment Weights

Container Type		Estimated Shipment Weight (lbs)			Number of Labels per Container
		Minimum	Typical	Maximum	
250 milliliter jug		0.5	0.7	1.1	1.13[a]
500 milliliter jug		0.9	1.3	2.1	1.13[a]
1 liter jug		1.8	2.5	4.2	1.25[a]
2 liter jug		3.6	4.9	8.2	1.25[a]
1 gallon jug		7	9	16	1.25[a]
2.5 gallon jug		18	24	40	1.5[a]
5 gallon drum		34	48	80	1
30 gallon drum		200	280	470	1
55 gallon drum		360	510	860	1
275 gallon tote		1,800	2,500	4,200	1
330 gallon tote		2,200	3,000	5,100	1
	5,500 gal.	34,000	48,000	82,000	0
Tank Truck	7,000 gal.	43,000	61,000	105,000	0
	20,000 gal.	129,000	182,000	311,000	0
Rail Car	30,000 gal.	186,000	260,000	450,000	0
Barge		2,700,000	3,800,000	6,500,000	0

[a] Assumes 8 units per package for containers smaller than 1 liter, 4 units per package for containers from 1 liter to 1 gallon, and 2 units per package for 2.5 gallon containers.

Source: Office of Regulatory Analysis, OSHA based on ERG (2010)

Based on these calculations, OSHA was able to estimate the number of each type of container that would fall into each of the U.S. Census weight classes. The number of containers that would require a label under the OSHA HCS was refined by estimating the percentage of each commodity that was comprised of nonhazardous products and the percentage of the remaining products that would be sold to consumers. Neither of these types of products fall under the scope of OSHA's HCS and would not require a hazard warning label under the revised rule. For the remaining hazardous non-consumer shipments, assuming one label per container and one label on the outer packaging where applicable, ERG estimated that approximately 949 million hazard labels are applied annually to containers of all sizes.

In most cases one SCTG maps to multiple NAICS industries. In order to divide the number of labels for each SCTG among its constituent NAICS industries, OSHA used receipts data from the U.S. Census Bureau's Statistics of U.S. Businesses to calculate receipts for a particular NAICS industry as a percentage of receipts for all NAICS industries that map to one SCTG. This percentage was used to allocate the estimated number of labels printed for each SCTG among its constituent NAICS industries.

The labels printed per NAICS industry were then distributed among the various size classes based on each size class's share of receipts. In cases where receipts data were not available from the Statistics of U.S. Business (a situation found exclusively within the chemical manufacturing industry in the affected industries for this rule), OSHA calculated the average total receipts and average receipts for each establishment size class for six-digit NAICS in the 325 (Chemical Manufacturing) subsector and the ratio of average receipts for size class to total receipts for six-digit NAICS in 325. This ratio was multiplied by total receipts for the appropriate size class for each industry where receipts data were not available.

Having estimated the number of hazard labels used per year for each NAICS code, OSHA next estimated the costs associated with printing those labels with red pictogram borders. Affected establishments were assigned to one of four categories:

- Category 1: Companies printing only in black who don't own a color printer
- Category 2: Companies printing in black but who own a color printer
- Category 3: Companies using pre-printed stock or labels
- Category 4: Companies printing color labels

Establishments in Category 1 and Category 2 will have to buy new color printers (although Category 2 establishments will have to buy fewer new printers), as well as either color cartridges for laser printers or red ribbons for thermal transfer printers. Establishments in Category 3 will face higher costs for pre-printed stock or labels with red pictogram borders. Establishments in Category 4 will not face higher costs. Relying on conversations with companies and label printers/vendors, ERG allotted establishments into these four categories on the basis of establishment size (as shown in Table VI–6).

Table V1-6. Establishment Distribution

Establishment Size	Category 1	2	3	4	Total
Very Small	30%	10%	40%	20%	100%
Small	30%	10%	40%	20%	100%
Medium	30%	10%	40%	20%	100%
Large	5%	15%	50%	30%	100%
Total	26%	11%	42%	22%	100%

Source: Office of Regulatory Analysis, OSHA based on ERG (2011)

Using the estimates of the percentage of establishments per category by size and the data presented in the industry profile, OSHA was able to estimate the number of establishments per category by size. OSHA used the ratio of SDSs produced by size class to the ratio of total SDSs produced and used that ratio to estimate the number of labels produced per size class per NAICS industry. The results are shown in Table VI–7.

Table VI-7. Establishments and Labels by Category

Size Category	Establishments in Category	Number of Labels Per Year
Category 1: Companies Printing only B&W and no Color Printer		
Very Small	16,237	10,635,815
Small	4,475	18,958,765
Medium	2,267	28,721,211
Large	739	37,746,817
Category 2: Companies Printing B&W but Own Color Printer		
Very Small	5,412	3,545,272
Small	1,492	6,319,588
Medium	756	9,573,737
Large	2,216	113,240,450
Category 3: Companies Using Pre-Printed Stock/Labels		
Very Small	21,649	14,181,086
Small	5,966	25,278,353
Medium	3,022	38,294,949
Large	7,387	377,468,168
Category 4: Companies Printing Color Labels		
Very Small	10,824	7,090,543
Small	2,983	12,639,177
Medium	1,511	19,147,474
Large	4,432	226,480,901
Total, All Categories		
Very Small	54,122	35,452,716
Small	14,916	63,195,884
Medium	7,555	95,737,371
Large	14,774	754,936,337

Source: Office of Regulatory Analysis, OSHA based on ERG (2011)

The number of establishments per category per size class and the number of labels per establishment were then combined with the incremental costs to print in color as opposed to black only to arrive at an estimate of the cost of this provision.

The unit costs by category were estimated as follows.

A low-end laser printer was estimated to cost only a few hundred dollars while a higher-end laser printer can cost upwards of $1,000 to $5,000. OSHA estimates that on average, the incremental cost of buying a color printer instead of a black and white printer is $50 for a low-end laser printer, $100 for a high-end laser printer, $100 for a low-end thermal transfer printer, and $1,000 for a high-end thermal transfer printer. In this analysis, OSHA considers the cost of printers to be a one-time cost that establishments will incur during the four year transition period. The one-time, non-annualized cost to establishments to upgrade printer technology was estimated to be $11.8 million. Printer costs were annualized using a 7 percent interest rate over a five-year period.

The incremental cost of color cartridges for laser printers is a significant driver of costs under the rule. Black cartridges cost approximately $300, while printing in color requires buying four cartridges (cyan, magenta, yellow, and black) at an estimated cost of $1,200. Additionally, printers using black cartridges can print 20,000 labels, while color cartridges can print only 6,000 labels. This results in a per-label cost of $0.015 for black cartridges and $0.20 for color cartridges, for an incremental cost of $0.185.

For companies using thermal transfer printers, the cost of ribbons varies depending on the label material, but is approximately $30 per ribbon for black ribbons and $40 per ribbon for red ribbons. Since both black and red ribbons will be required to print labels under the final rule, the incremental cost of printing in color is the cost of the red ribbon or $40. Both types of ribbons will print approximately 1,000 labels, for a per-label cost of $0.034 for black ribbons and $0.04 for red ribbons, for an incremental cost of $0.01 per label.

For companies using pre-printed stock/labels, the cost of all black labels is estimated to be $0.10 per label while the cost of labels with red pictograms is estimated to be $0.15 per label. This results in an incremental cost of $0.05 per label.

For the purposes of this analysis, OSHA estimated that for those establishments in category 1 (those currently printing labels only with black ink who don't own a color printer) very small establishments will purchase one low-end laser printer, small establishments will purchase two high-end laser printers, medium establishments will purchase three low-end thermal transfer printers, and large establishments will purchase four high-end thermal transfer printers. For establishments in category 2 (those currently printing labels only in black ink but who own a color printer), OSHA estimated that very small establishments will purchase one low-end laser printer, small establishments will purchase one high-end laser printer, medium establishments will purchase two low-end thermal transfer printers, and large establishments will purchase three high-end thermal transfer printers. OSHA estimates that establishments in categories 3 and 4 (those purchasing preprinted black and white labels and those currently printing labels in color) will incur no costs to procure new printers.

Using the estimates described above, OSHA was able to determine the current costs of printing and the cost of printing labels with red-bordered pictograms.

For establishments in Category 1 (those printing black and white labels), the current average cost per label is $0.02 and the average cost per establishment is $132, and for establishments in Category 2 (those printing black and white labels but who own a color printer), the current average cost per label is $0.03 and the average cost per establishment is $344. Establishments in Category 1 and Category 2 will have to buy new color printers (although those in Category 2 will have to buy fewer printers). These establishments will also face higher costs for purchasing color cartridges and ribbons. For these establishments, the cost of purchasing a color printer becomes insignificant when annualized (at a 7 percent interest rate over five years) and when considered on a per-label basis. The main driver of overall costs is the incremental cost of purchasing color cartridges for those establishments using laser printers (establishments that OSHA estimates are small and very small). For very small and small establishments using a laser printer, the cost of cartridges goes from under $0.02 per label for a black cartridge to $0.20 per label for color cartridges. Cost increases are more modest for medium and large establishments using thermal transfer printers, with ribbon costs only increasing from $0.03 to $0.04 per label.

For establishments in Category 3 (those who use pre-printed stock or labels) the current average cost per label is $0.10 and the average cost to purchase labels per establishment is $1,148. Establishments in Category 3 will have to pay more for pre-printed stock or pre-printed labels with red pictograms than for their current hazard labels. OSHA estimates that costs will increase from $0.10 per label to $0.15 per label, increasing printing costs by 50 percent for all establishments in this category.

For establishments in Category 4 (those currently printing in color) the current average cost per label is $0.15 and the average cost per establishment is $1,880. Establishments in Category 4 will not have to pay any more to print red borders as they are already printing color labels.

The annualized cost of printers was calculated by finding the present value of the incremental printer cost incurred four years after the rule is published (to account for the compliance time for the labeling provisions of the rule). This present value was annualized over five years at a 7 percent interest rate to account for the life of the printer. In the cases of printing supplies (*i.e.,* cartridges, ribbons, or label stock), costs are calculated as though they would be incurred over a 20-year period, but would not begin to be incurred until four years after the rule is published. Detailed estimates are presented in Table VI–9 included in the appendix at the end of this section.

For all establishments in all categories, the total costs associated with the requirement to print red pictogram borders are approximately $24.1 million per year, which includes the annualized cost of new printers (approximately $2.4 million) and of 16 years' worth of annual printing supply costs. OSHA feels this estimate is in line with the comments received on the subject as part of the rulemaking record. Betco Corporation estimated that requiring color printing would increase printing costs by 25 percent (Document ID #0389), Dow Chemical estimated that black and white printing was 40 percent less expensive than color printing (Document ID #0353), and The National Paint & Coatings Association, Inc. estimated an increase of 15 percent to 47 percent to print in color depending on the size of the label (Document ID #0328). The Agency also feels that the four-year phase-in period allows adequate time for establishments to exhaust their current stock of labels, which will help ameliorate some cost concerns expressed by stakeholders.

Summary of Unit Cost Estimates

The following list provides a summary of the input estimates underlying the calculation of the compliance costs. It should be noted that these costs are intended to reflect only the incremental costs that would be incurred in addition to the associated costs that would be incurred in the absence of the revisions to the HCS. Except for employee training and color printing, these costs would apply only to those businesses not already in compliance with the revisions.

Reclassifying chemicals and modifying SDSs and labels:

- Large establishments (over 500 employees): an average of 3 hours per SDS; in addition, for 95 percent of establishments, an average of $208 per SDS for software modifications.
- Medium establishments (100–499 employees): an average of 5 hours per SDS; in addition, for 25 percent of establishments, an average of $208 per SDS for software modifications.
- Small establishments (1–99 employees): an average of 7 hours per SDS. Management familiarization and other costs:
- Eight hours for health and safety managers and logistics personnel in the manufacturing sector.
- Two hours for each hazard communication program manager not in the manufacturing sector.

Employee training:

- One hour per production employee in most industries;
- 30 minutes in occupations exposed to few hazardous chemicals and types of hazards;
- 10 minutes per employee in some occupations where GHS-type pictograms are already in use.

Color Printing

- Category 1 establishments (those currently printing only in black & white who do not own color printers): Large establishments $0.02 per label, medium establishments $0.01 per label, small establishments $0.13 per label, and very small establishments $0.14 per label.
- Category 2 establishments (those currently printing only in black & white but who own color printers): large establishments $0.02 per label, medium establishments $0.01 per label, small establishments $0.13 per label, and very small establishments $0.14 per label.
- Category 3 establishments (those currently purchasing pre-printed label stock): large establishments $0.03 per label, medium establishments $0.03 per label, small and very small establishments $0.03 per label.
- Category 4 establishments (those currently producing labels printed in multiple colors): No additional costs related to this provision.

Appendix to Section F: Total Non-Annualized Costs of Compliance

Table VI–8 shows the total non-annualized (non-discounted) compliance costs by industry and by cost element that are estimated to be incurred during the four-year phase-in of the revisions. Except for employee training and color printing, these estimates include no costs for businesses already in compliance with the revisions.

As shown in Table VI–8, the total cost of compliance with the rulemaking over the course of the transition period of four years is estimated to be about $2.1 billion. Of this amount, the cost of chemical hazard reclassification and revision of SDSs and labels is an estimated $281 million, the cost of training employees is an estimated $1,118 million, the cost of management familiarization and other costs such as updates to hazard communication programs is an estimated $692 million, and the one-time printer costs for companies needing to upgrade printing technology to print labels in color is an estimated $12 million.

Table VI–9 summarizes OSHA's estimates for printing costs. It shows annualized per-label costs by category and establishment size ranging from $0.01 to $0.14 and total annualized costs by category and establishment size. Total annualized costs include the cost of printers annualized over five years and the cost of printing supplies incurred over a 20-year period beginning four years after the rule is published.

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Table VI-8.
Total Costs of Compliance during Transition Period

NAICS Code	Industry	Cost of Reclassification and Revision of SDSs & Labels	Cost of Training Employees	Management Familiarization & Other Costs	One-Time Printer Costs	Total Costs
11	**Agriculture, Forestry, Fishing & Hunting**					
113	Forestry & Logging	$0	$761,836	$1,096,318	$0	$1,858,153
114	Fishing, Hunting and Trappinig	$0	$74,061	$98,885	$0	$172,946
115	Support Activities for Ag & Forestry	$0	$410,931	$489,409	$0	$900,340
211	**Oil and Gas Extraction**					
211111	Crude petroleum & natural gas extraction	$19,372,038	$2,651,234	$3,623,590	$0	$25,646,863
211112	Natural gas liquid extraction	$864,246	$202,401	$90,742	$0	$1,157,389
212	Mining (except Oil & Gas)	$0	$3,068,524	$951,225	$0	$4,019,749
213	Support Activities for Mining	$0	$3,583,490	$1,126,023	$0	$4,709,513
22	**Utilities**					
2211	Electric Power Gen, Trans & Distrib	$0	$9,381,823	$4,392,355	$0	$13,774,178
2212	Natural Gas Distribution	$0	$1,003,184	$1,239,756	$0	$2,242,940
2213	Water, Sewage, & Other Systems	$0	$848,412	$2,318,357	$0	$3,166,769
23	**Construction**					
236	Construction of Buildings	$0	$32,833,731	$29,889,179	$0	$62,722,909
237	Heavy Construction	$0	$13,443,559	$5,274,180	$0	$18,717,739
238	Special Trade Contractors	$0	$79,911,845	$58,615,764	$0	$138,527,609
31	**Manufacturing**					
311	Food Manufacturing	$0	$32,035,849	$13,078,927	$0	$45,114,776
312	Beverage &Tobacco Prod. Manuf.	$0	$2,708,287	$1,969,911	$0	$4,678,197
313	Textile Mills	$0	$4,005,063	$1,598,052	$0	$5,603,115
314	Textile Product Mills	$0	$3,700,607	$3,574,615	$0	$7,275,222
315	Apparel Manufacturing	$0	$8,085,632	$5,785,224	$0	$13,870,855
316	Leather & Allied Product Manufac.	$0	$872,297	$739,306	$0	$1,611,604
321	Wood Product Manufacturing	$0	$12,666,117	$8,597,706	$0	$21,263,823
322	Paper Manufacturing	$0	$9,393,458	$2,324,258	$0	$11,717,716
323	Printing and Related Support	$0	$14,172,035	$17,507,178	$0	$31,679,213
324	**Petroleum & Coal Prod. Manufac.**					
324110	Petroleum refineries	$3,950,224	$1,105,201	$170,923	$104,110	$5,330,458
324121	Asphalt paving mixture & block mfg	$19,507,491	$349,431	$497,823	$499,510	$20,854,256

Table VI-8.
Total Costs of Compliance during Transition Period (continued)

NAICS Code	Industry	Cost of Reclassification and Revision of SDSs & Labels	Cost of Training Employees	Management Familiarization & Other Costs	One-Time Printer Costs	Total Costs
324	**Petroleum & Coal Prod. Manufac.**					
324122	Asphalt shingle & coating materials mfg	$2,928,198	$245,560	$95,128	$68,250	$3,337,136
324191	Petroleum lubricating oil & grease m	$109,394,737	$166,018	$176,282	$46,950	$109,783,987
324199	All other petroleum & coal products mfg	$1,039,991	$69,844	$44,007	$16,140	$1,169,982
325	**Chemical Manufacturing**					
325110	Petrochemical mfg	$585,728	$116,271	$23,307	$22,370	$747,676
325120	Industrial gas mfg	$556,565	$8,054	$190,183	$303,670	$1,058,472
325131	Inorganic dye & pigment mfg	$161,929	$50,521	$53,514	$20,960	$286,924
325132	Synthetic organic dye & pigment mfg	$532,839	$83,637	$58,677	$20,420	$695,573
325181	Alkalies & chlorine mfg	$73,203	$0	$20,893	$17,880	$111,976
325182	Carbon black mfg	$42,633	$0	$13,101	$9,540	$65,275
325188	All other basic inorganic chemical mfg	$2,740,735	$745,601	$290,336	$177,240	$3,953,912
325191	Gum & wood chemical mfg	$432,698	$32,356	$34,476	$9,430	$508,960
325192	Cyclic crude & intermediate mfg	$58,999	$84,571	$19,081	$9,550	$172,201
325193	Ethyl alcohol mfg	$854,141	$130,819	$138,768	$19,820	$1,143,549
325199	All other basic organic chemical mfg	$4,202,772	$1,127,684	$354,429	$188,220	$5,873,105
325211	Plastics material & resin mfg	$11,786,608	$1,105,863	$399,367	$210,110	$13,501,948
325212	Synthetic rubber mfg	$310,109	$174,855	$85,727	$30,190	$600,882
325221	Cellulosic organic fiber mfg	$7,021	$52,751	$11,495	$2,570	$73,837
325222	Noncellulosic organic fiber mfg	$0	$394,262	$61,566	$0	$455,828
325311	Nitrogenous fertilizer mfg	$62,429	$26,257	$98,880	$28,610	$216,177
325312	Phosphatic fertilizer mfg	$14,326	$14,025	$22,348	$13,440	$64,139
325314	Fertilizer (mixing only) mfg	$897,520	$165,196	$289,848	$68,670	$1,421,234
325320	Pesticide & other agricultural chemical mfg	$1,154,461	$171,100	$124,788	$54,030	$1,504,379
325411	Medicinal & botanical mfg	$1,058,085	$334,287	$207,015	$47,960	$1,647,347
325412	Pharmaceutical preparation mfg	$2,945,309	$1,946,506	$532,750	$218,940	$5,643,505
325413	In-vitro diagnostic substance mfg	$4,028,692	$294,582	$131,150	$48,440	$4,502,864
325414	Biological product (except diagnostic) mfg	$584,754	$394,047	$150,877	$85,610	$1,215,288
325510	Paint & coating mfg	$14,252,071	$545,201	$776,347	$181,900	$15,755,519
325520	Adhesive mfg	$5,185,730	$391,262	$324,138	$118,460	$6,019,591

Table VI-8.
Total Costs of Compliance during Transition Period (continued)

NAICS Code	Industry	Cost of Reclassification and Revision of SDSs & Labels	Cost of Training Employees	Management Familiarization & Other Costs	One-Time Printer Costs	Total Costs
325	**Chemical Manufacturing**					
325611	Soap & other detergent mfg	$3,386,775	$431,109	$439,460	$64,270	$4,321,613
325612	Polish & other sanitation good mfg	$2,245,744	$280,726	$359,492	$47,370	$2,933,332
325613	Surface active agent mfg	$1,000,438	$80,842	$82,686	$32,030	$1,195,995
325620	Toilet preparation mfg	$3,916,910	$1,070,277	$511,173	$93,070	$5,591,430
325910	Printing ink mfg	$7,111,319	$196,206	$245,528	$117,620	$7,670,673
325920	Explosives mfg	$316,089	$119,418	$35,022	$26,240	$496,770
325991	Custom compounding of purchased resin	$1,060,665	$402,427	$346,392	$93,080	$1,902,564
325992	Photographic film, paper, plate, & chemical mfg	$834,937	$133,931	$280,206	$33,750	$1,282,825
325998	All other miscellaneous chemical product & preparation mfg	$9,735,649	$632,012	$727,691	$171,790	$11,267,143
326	Plastics and Rubber Products Man.	$9,918,393	$19,293,692	$6,996,994	$2,393,990	$38,603,069
327	Nonmetallic Mineral Prod. Manufac.	$11,255,479	$11,014,675	$7,696,463	$3,466,920	$33,433,536
331	Primary Metal Manufacturing	$3,587,506	$9,809,003	$2,711,738	$895,140	$17,003,386
332	Fabricated Metal Prod. Manufac.	$0	$34,367,356	$31,583,489	$0	$65,950,844
333	Machinery Manufacturing	$0	$20,640,396	$13,586,090	$0	$34,226,486
334	Computer & Electronic Prod Man.	$0	$13,552,651	$7,432,685	$0	$20,985,336
335	Electric Equipment, Appliance Man.	$0	$8,420,877	$3,121,122	$0	$11,541,998
336	Transportation Equip. Manufacturing	$0	$32,038,215	$7,117,955	$0	$39,156,170
337	Furniture & Related Product Man.	$0	$12,151,235	$11,626,020	$0	$23,777,255
339	Miscellaneous Manufacturing	$17,119,063	$13,316,597	$16,370,063	$1,729,520	$48,535,243
42	**Wholesale Trade**					
423	Durable Goods	$0	$20,793,901	$21,751,951	$0	$42,545,852
424	Nondurable Goods	$0	$13,312,092	$12,608,313	$0	$25,920,406
42469	Other Chemicals & AlliedProducts	$0	$787,728	$1,093,281	$0	$1,881,009
4247	Petroleum & petroleum Products	$0	$731,540	$1,023,045	$0	$1,754,585
42495	Paint, Varnish, & Supplies	$0	$144,660	$197,110	$0	$341,770

Table VI-8.
Total Costs of Compliance during Transition Period (continued)

NAICS Code	Industry	Cost of Reclassification and Revision of SDSs & Labels	Cost of Training Employees	Management Familiarization & Other Costs	One-Time Printer Costs	Total Costs
44-45	**Retail Trade**					
441	Motor vehicle & parts dealers	$0	$17,746,120	$15,299,467	$0	$33,045,586
442	Furniture & home furnishings stores	$0	$2,887,276	$4,212,585	$0	$7,099,860
443	Electronics & appliance stores	$0	$1,028,381	$1,482,881	$0	$2,511,261
444	Building material & garden equipment & supplies dealers	$0	$5,263,984	$6,965,789	$0	$12,229,773
445	Food & beverage stores	$0	$7,367,518	$8,872,331	$0	$16,239,849
446	Health & personal care stores	$0	$13,783,895	$10,901,654	$0	$24,685,549
447	Gasoline stations	$0	$4,423,466	$6,697,123	$0	$11,120,588
448	Clothing & clothing accessories stores	$0	$864,884	$1,254,745	$0	$2,119,629
451	Sporting goods, hobby, book, & music stores	$0	$1,151,121	$1,724,350	$0	$2,875,471
452	General merchandise stores	$0	$4,550,599	$5,363,032	$0	$9,913,631
453	Miscellaneous store retailers	$0	$2,242,483	$3,397,608	$0	$5,640,091
454	Nonstore retailers	$0	$2,215,416	$2,748,848	$0	$4,964,263
48-49	**Transportation & Warehousing**					
481	Air transportation	$0	$1,333,320	$514,757	$0	$1,848,077
483	Water transportation	$0	$697,893	$242,394	$0	$940,287
484	Truck transportation	$0	$16,185,182	$10,094,994	$0	$26,280,177
485	Transit & ground passenger transportation	$0	$1,100,192	$1,081,399	$0	$2,181,591
486	Pipeline transportation	$0	$337,719	$352,501	$0	$690,220
487	Scenic & sightseeing transportation	$0	$112,806	$134,531	$0	$247,337
488	Support activities for transportation	$0	$5,089,423	$3,467,316	$0	$8,556,739
492	Couriers & messengers	$0	$4,399,349	$1,201,804	$0	$5,601,153
493	Warehousing & storage	$0	$7,322,655	$1,007,202	$0	$8,329,857
51	**Information**					
511	Publishing industries	$0	$3,238,982	$2,483,614	$0	$5,722,596
512	Motion picture & sound recording industries	$0	$352,855	$514,097	$0	$866,952
515	Broadcasting (except Internet)	$0	$2,559,300	$4,847,086	$0	$7,406,387
516	Internet Publishing and Broadcasting	$0	$2,978,602	$855,112	$0	$3,833,714
517	Telecommunications	$0	$439,520	$4,847,086	$0	$5,286,606
518	Internet Service Providers, Web Search Portals, and Data	$0	$542,194	$855,112	$0	$1,397,306
519	Other Information Services	$0	$441,581	$855,112	$0	$1,296,693

Table VI-8.
Total Costs of Compliance during Transition Period (continued)

NAICS Code	Industry	Cost of Reclassification and Revision of SDSs & Labels	Cost of Training Employees	Management Familiarization & Other Costs	One-Time Printer Costs	Total Costs
52	**Finance & Insurance**					
521	Monetary authorities - central bank	$0	$7,009	$8,053	$0	$15,062
522	Credit intermediation & related activities	$0	$537,720	$798,210	$0	$1,335,930
523	Securities intermediation & related activities	$0	$192,285	$295,335	$0	$487,620
524	Insurance carriers & related activities	$0	$3,713,142	$5,619,420	$0	$9,332,562
525	Funds, trusts, & other financial vehicles (part)	$0	$64,773	$98,489	$0	$163,262
53	**Real Estate & Rental and Leasing**					
531	Real estate	$0	$11,054,514	$14,262,163	$0	$25,316,677
532	Rental & leasing services	$0	$4,598,780	$6,269,765	$0	$10,868,545
533	Lessors of intangible assets, except copyrighted works	$0	$62,205	$85,419	$0	$147,624
54	**Professional, Technical & Technical**					
5411	Legal services	$0	$125,182	$186,416	$0	$311,598
5412	Accounting, tax return prep, bookkeeping, & payroll	$0	$1,280,274	$1,891,227	$0	$3,171,501
5413	Architectural, engineering, & related services	$0	$2,415,506	$3,397,872	$0	$5,813,378
5414	Specialized design services	$0	$584,946	$819,598	$0	$1,404,543
5415	Computer systems design & related services	$0	$465,723	$672,260	$0	$1,137,984
5416	Management, scientific, & technical consulting services	$0	$2,048,432	$2,615,901	$0	$4,664,332
5417	Scientific R&D Serv.	$0	$1,250,447	$856,960	$0	$2,107,407
5418	Advertising & related services	$0	$1,131,118	$1,466,510	$0	$2,597,627
5419	Other professional, scientific, & technical services	$0	$9,565,328	$9,545,647	$0	$19,110,976
55	**Management of Companies**					
551111	Offices of bank holding companies	$0	$89,710	$134,795	$0	$224,505
551112	Offices of other holding companies	$0	$547,700	$697,873	$0	$1,245,572
551114	Corporate, subsidiary, & regional managing offices	$0	$7,089,489	$4,562,445	$0	$11,651,934
56	**Adm and Support & Waste Managmt**					
561	Administrative and Support Serv.	$0	$87,286,642	$36,408,466	$0	$123,695,109
562	Wastemanagement & Remediation Serv.	$0	$4,529,397	$2,336,540	$0	$6,865,937

Table VI-8.
Total Costs of Compliance during Transition Period (continued)

NAICS Code	Industry	Cost of Reclassification and Revision of SDSs & Labels	Cost of Training Employees	Management Familiarization & Other Costs	One-Time Printer Costs	Total Costs
61	**Educational Services**					
6114	Business schools, & computer & management training	$0	$25,682	$37,627	$0	$63,309
6115	Technical & trade schools	$0	$191,500	$255,860	$0	$447,360
6116	Other schools & instruction	$0	$206,940	$284,905	$0	$491,845
6117	Educational support services	$0	$95,880	$131,891	$0	$227,770
62	**Healthcare and Social Assistance**					
621	Ambulatory health care services	$0	$115,892,872	$64,393,743	$0	$180,286,616
622	Hospitals	$0	$104,558,663	$999,281	$0	$105,557,944
623	Nursing & residential care facilities	$0	$53,576,064	$8,964,351	$0	$62,540,415
624	Social assistance	$0	$12,134,799	$13,470,026	$0	$25,604,825
71	**Arts, Entertainment & Recreation**					
711	Performing arts, spectator sports, & related industries	$0	$1,224,553	$1,065,952	$0	$2,290,505
712	Museums, historical sites, & similar institutions	$0	$344,797	$334,018	$0	$678,815
713	Amusement, gambling, & recreation industries	$0	$5,751,969	$4,683,774	$0	$10,435,743
72	**Accommodation & Food Services**					
721	Accommodation	$0	$14,716,394	$7,624,847	$0	$22,341,241
722	Foodservices & drinking places	$0	$3,862,750	$5,621,797	$0	$9,484,547
81	**Other Services (except Public Adm.)**					
811	Repair & maintenance	$0	$29,183,152	$30,786,274	$0	$59,969,426
811121	Automotive body, paint, & interior repair & maintenance	$0	$3,328,946	$2,191,315	$0	$5,520,261
812	Personal & laundry services	$0	$13,683,944	$18,216,247	$0	$31,900,191
812320	Drycleaning & laundry services (except coin-operated)	$0	$1,871,904	$2,713,729	$0	$4,585,634
812921	Photofinishing laboratories (except one-hour)	$0	$135,766	$332,037	$0	$467,803
813	Religious/grantmaking/civic/professional & similar org	$0	$7,778,119	$10,830,097	$0	$18,608,216
99	**State and Local Government**					
9992	State Government	$0	$5,678,048	$1,683,291	$0	$7,361,339
9993	Local Government	$0	$28,647,622	$1,406,703	$0	$30,054,326
	Total	**$281,075,248**	**$1,118,239,150**	**$691,624,961**	**$11,807,780**	**$2,102,747,140**
	Total for firms producing SDSs	**$281,075,248**	**$69,566,050**	**$45,852,902**	**$11,807,780**	**$408,301,980**
	Total for firms not producing SDSs	**$0**	**$1,048,673,100**	**$645,772,059**	**$0**	**$1,694,445,159**

Note: Costs are expressed in 2010 dollars
Source: Office of Regulatory Analysis, OSHA based on PP&E (2009) and ERG (2012)

Table VI-9. Summary of Color Printing Costs

Size Category	Annualized Printer Costs per Label[1]	Annualized Cartridge/Ribbon/Stock Costs per Label	Total Annualized Costs per Label	Total Annualized Costs per Establishment	Total Annualized Costs, All Establishments
Category 1: Companies Printing Only B&W and No Color Printer					
Very Small	$0.01	$0.13	$0.14	$91.74	$1,489,571
Small	$0.01	$0.13	$0.13	$570.41	$2,552,483
Medium	$0.00	$0.01	$0.01	$142.02	$321,896
Large	$0.01	$0.01	$0.02	$1,091.86	$806,560
Category 2: Companies Printing B&W but Own Color Printer					
Very Small	$0.01	$0.13	$0.14	$91.74	$496,524
Small	$0.00	$0.13	$0.13	$551.81	$823,074
Medium	$0.00	$0.01	$0.01	$123.42	$93,242
Large	$0.01	$0.01	$0.02	$905.80	$2,007,345
Category 3: Companies Using Pre-Printed Stock/Labels					
Very Small	$ -	$0.03	$0.03	$22.28	$482,349
Small	$ -	$0.03	$0.03	$144.11	$859,807
Medium	$ -	$0.03	$0.03	$431.02	$1,302,548
Large	$ -	$0.03	$0.03	$1,738.06	$12,839,037
Category 4: Companies Printing Color Labels					
Very Small	$ -	$ -	$ -	$ -	$ -
Small	$ -	$ -	$ -	$ -	$ -
Medium	$ -	$ -	$ -	$ -	$ -
Large	$ -	$ -	$ -	$ -	$ -
Total					$24,074,395

1 - Includes the cost of printers annualized over five years and the cost of printing supplies incurred over a 20-year period beginning four years after the rule is published

$ - entries indicated no costs, while $0.000 entries are non-zero fractions of a penny

Source: Office of Regulatory Analysis, OSHA based on ERG (2011)

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G. Net Benefits, Cost-Effectiveness, and Regulatory Alternatives

Table VI–1 provides a summary of the costs and benefits of the revisions to the OSHA HCS, and it shows the net benefits and cost-effectiveness of the revisions to the standard. Net monetized benefits are estimated to be $556 million annually, expressed in 2010 dollars and using a 7 percent discount rate. (Using a 3 percent discount rate instead would have the effect of lowering the costs to $161 million per year and increasing the gross benefits to $839 million per year. The result would be to increase net benefits from $556 million to $678 million per year.) The cost-effectiveness of the standard can be expressed as more than three dollars of benefits for every dollar of cost.

Some qualitative evidence of the cost-effectiveness of the standard was provided by comments submitted in response to the ANPR published by OSHA in the **Federal Register** on September 12, 2006 (71 FR 53617) and the Proposed Rule published by OSHA in the **Federal Register** on September 30, 2009 (74 FR 50280). There was widespread support among the commenters for the adoption of GHS in the United States (Document ID #0340, 0344, 0347, 0349, 0351, 0354, 0357, 0359, 0366, 0382, 0390, 0403, 0408, and 0414). Many stakeholders anticipate that the revisions to the HCS will ''achieve more effective hazard communication'' (Document ID #0344 and 0351), ''enhance the consistency and quality of hazard information for workers'' (Document ID #0347), and ''serve to further enhance worker protection'' (Document ID #0329). These sentiments were echoed in many of the comments submitted to the record and in much of the testimony delivered at the public hearings. This voicing of support included commenters who provided some of the largest estimates of the costs of the revisions (Document ID #0032, 0050, 0329, 0338, and 0341).

The available alternatives to the final rule are somewhat limited since this rule modifies the current HCS in order to align with the provisions of the UN's GHS. In Section III, the Agency qualitatively discussed the two major alternatives presented during this rulemaking process—(1) voluntary adoption of GHS within the existing HCS framework and (2) a limited adoption of specific GHS components and a variation on (1) that would require compliance with GHS but allow an exemption for small businesses to comply with either the current HCS or with the GHS-compliant HCS. All of these alternatives were soundly rejected by stakeholders. To allow certain parties to follow an alternative system or to allow voluntary adoption of the elements of a uniformity standard does nothing to reduce confusion, improve efficiency, or simplify processes. In order for those benefits to be realized, all elements must apply to all affected parties. OSHA has determined that both of the alternatives presented above would eliminate significant portions of the benefits of the rule.

OSHA did not attempt to evaluate the costs and benefits for the regulatory alternatives that involved partial or voluntary adoption of the GHS. The Agency did evaluate two alternatives where the effective dates were altered. For both alternatives, OSHA re-estimated the costs, benefits, and net benefits simply by adjusting the effective dates in its formulas. The results are summarized in Table VI–10.

In the first alternative considered, all elements of the revised HCS would be required to be implemented within two

years. Under this alternative, all transitional costs would be incurred in two years and benefits would be realized beginning in the third year. OSHA estimated that annualized costs under this alternative would increase by $5 million, from $201 million to $206 million, while annualized benefits would increase by $166 million, from $757 million to $923 million. Estimated net benefits would therefore increase by $161 million, from $556 million to $717 million. However, OSHA believes that these estimates fail to capture the difficulty many firms would encounter in meeting these tighter enforcement dates. As a result, initial compliance rates would probably be lower and less effective, leading to reduced benefits. In addition, some compliance costs—such as for labels and signs—were viewed in this final rule as incremental, reflective of taking place within a normal replacement cycle of 3 to 5 years. With implementation required within two years, these costs could no longer be treated as incremental to existing HCS requirements, but would have to be recalculated as total replacement costs.

The second alternative that OSHA evaluated extended the timeline for training to be completed. For this alternative, all elements of the revised HCS (including training) would be required to be implemented by June 1, 2016. Under this alternative, training costs would not be realized for four and a half years (as opposed to the two-year requirement for training in the final version of this rule) while benefits would not be realized for five years (unchanged from the final rule). OSHA estimated that annualized costs under this second alternative would decrease by $12 million, from $201 million to $189 million, while annualized benefits would be unchanged. Estimated net benefits would therefore increase by $12 million, from $556 million to $568 million. However, these estimates fail to recognize that workers will be exposed to (some) GHS-compliant labels and SDS formats well before the 4½ year training date. The Agency would therefore expect an increase in injuries, illnesses, and fatalities as untrained workers are unable to effectively process and respond to the revised labels and SDS formats. As a result, benefits and net benefits would actually decline relative to those estimated for the final rule.

In summary, although both alternatives show greater net benefits, the Agency concludes that the timing of the final rule is preferable because of additional (but unquantified) compliance costs and reduced (but unquantified) benefits under the first alternative and because of reduced (but unquantified) worker health and safety benefits under the second alternative. In addition, OSHA expects that the final rule offers coordination benefits in that its requirements will fully take effect at the same time as the EU completes its transition.

Table VI-10
Regulatory Alternatives

	Years After Promulgation								
	To Complete Training	For Full Implementation	Until Benefits are Realized	Annualized Benefits	Annualized Costs	Annualized Net Benefits	Benefits Relative to Final Rule Implementation Timeline	Costs Relative to Final Rule Implementation Timeline	Net Benefits Relative to Final Rule Implementation Timeline
Alternative 1									
	2 years	2 years	3 years	$923 million	$206 million	$717 million	+ $166 million	+ $5 million	+ $161 million
Final Rule Implementation Timeline									
	2 years	4.5 years	5 years	$757 million	$201 million	$556 million	--	--	--
Alternative 2									
	4.5 years	4.5 years	5 years	$756 million	$189 million	$568 million	--	-$12 million	+ $12 million

Source: Office of Regulatory Analysis, OSHA

H. Economic Feasibility and Impacts

This section presents OSHA's analysis of the potential economic impacts of the final rule and an assessment of economic feasibility. A separate analysis of the potential economic impacts on small entities (as defined in accordance with the criteria established by the Small Business Administration) and on very small entities (those with fewer than 20 employees) is presented in the following section as part of the Final Regulatory Flexibility Screening Analysis, conducted in accordance with the criteria laid out in the Regulatory Flexibility Act.

To determine whether a rule is economically feasible, OSHA begins with two screening tests to consider minimum threshold effects of the rule under two extreme cases: (1) All costs are passed through to customers in the form of higher prices (consistent with a price elasticity of demand of zero), and (2) all costs are absorbed by the firm in the form of reduced profits (consistent with an infinite price elasticity of demand).

In the former case, the immediate impact of the rule would be observed in increased industry revenues. While there is no hard and fast rule, in the absence of evidence to the contrary, OSHA generally considers a standard to be economically feasible for an industry when the annualized costs of compliance are less than a threshold level of one percent of annual revenues. Common-sense considerations indicate that potential impacts of such a small magnitude are unlikely to eliminate an industry or significantly alter its competitive structure, particularly since most industries have at least some ability to raise prices to reflect increased costs and normal price variations for products typically exceed three percent a year (OSHA, 2011, Chapter VI). Of course, OSHA recognizes that even when costs are within this range, there could be unusual circumstances requiring further analysis.

In the latter case, the immediate impact of the rule would be observed in reduced industry profits. OSHA uses the ratio of annualized costs to annual profits as a second check on economic feasibility. Again, while there is no hard and fast rule, in the absence of evidence to the contrary, OSHA generally considers a standard to be economically feasible for an industry when the annualized costs of compliance are less than a threshold level of ten percent of annual profits. This is a fairly modest threshold level, given that normal year-to-year variations in profit rates in an industry can exceed 40 percent or more (OSHA, 2011, Chapter VI).

For this final rule, all hazardous chemicals distributed in the United States have to be in compliance with the SDS and labeling revisions to the HCS, and chemical producers and users in most advanced economies will be under comparable GHS requirements (encompassing training, etc.) specific to their own country or economic union. For this reason, affected domestic establishments should not be susceptible to foreign competitors not bound by the requirements of the revisions to the HCS or similar GHS requirements. As a result, OSHA expects that the costs of this final rule will be passed on in higher prices rather than absorbed in lost profits, and therefore the Agency will tend to be primarily concerned with the ratio of industry costs to industry revenues rather than with the ratio of industry costs to industry profits.

In order to assess the nature and magnitude of the economic impacts associated with compliance with the final rule, OSHA developed quantitative estimates of the potential economic impact of the requirements on each of the affected industry sectors. The estimated costs of compliance presented in Section VI.F of this preamble were compared with industry revenues and profits to provide a measure of potential economic impacts. Although Section VI.G also contains estimates of substantial productivity benefits arising from this final rule that more than offset the estimated costs, these cost savings have not been included in estimating the economic impacts of the final rule.

Table VI–11 presents data on revenues and profits for each affected industry sector at the six digit NAICS industry level, along with the corresponding estimated annualized costs of compliance in each sector. Potential impacts in the table are represented by the ratios of compliance costs to revenues and compliance costs to profits.

As is evident from the data and estimates presented in Table VI–6, the costs of compliance for the final rule are not large in relation to the corresponding revenues and profits in each of the industry sectors. The estimated costs of compliance represent about 0.001 percent of revenues and about 0.011 percent of profits on average across all entities; compliance costs represent less than 0.09 percent of revenues or, with the exception of three chemical manufacturing industries, less than 0.9 percent of profits in any individual industry sector. These three chemical manufacturing industries are NAICS 325181 Alkalies & chlorine manufacturing, NAICS 325191 Gum & wood chemical manufacturing, and NAICS 325992 Photographic film, paper, plate, & chemical manufacturing, and their compliance costs as a percentage of profits are 4.3 percent, 2.1 percent, and 2.4 percent, respectively. The cost of printing labels in color is the main cost driver for these industries.

Based on the Agency's two screening tests to determine if the economic impacts of the final rule exceed some minimum threshold level (*i.e.,* costs equal to one percent of revenue or ten percent of profits), OSHA concludes that the rule is economically feasible for the affected industries. In general, the courts have held that a standard is economically feasible if there is a reasonable likelihood that the estimated costs of compliance ''will not threaten the existence or competitive structure of an industry, even if it does portend disaster for some marginal firms'' (*United Steelworkers of America* v. *Marshall,* 647 F.2d 1189, 1272 (DC Cir. 1980)). The potential impacts of employer costs associated with achieving compliance with the final rule fall well within the bounds of economic feasibility in each industry sector. OSHA does not expect compliance with the requirements of the final rule to threaten the viability of employers or the competitive structure of any of the affected industry sectors.

The economic impact of the final rule is most likely to consist of a very small increase in prices for affected hazardous chemicals, of about 0.001 percent on average. Chemical manufacturing companies, all of whom must incur the costs of compliance unless they are already doing so, should be able to pass through costs to customers. The additional costs of a one-time revision to SDS and labeling criteria and one-time investments in printing technology are extremely small in relation to the value of the corresponding products, and there are generally no economic substitutes, or alternatives, that would not be subject to the same requirements. It is unlikely that a price increase of this magnitude would significantly alter the types or amounts of goods and services demanded by the public or any other affected customers or intermediaries. If the compliance costs of the final rule can be substantially recouped with a minimal increase in prices, there would be little or no effect on profits.

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Table VI-11.
Potential Economic Impacts

NAICS Code	Industry	Total Annualized Costs	Revenues ($1,000)	Profits ($1,000)	Costs as a Percent of Revenues	Costs as a Percent of Profits
11	**Agriculture, Forestry, Fishing & Hunting**					
113	Forestry & Logging	$158,560	$11,760,017	$464,427	0.0013%	0.0341%
114	Fishing, Hunting and Trappinig	$14,758	$2,409,281	$135,700	0.0006%	0.0109%
115	Support Activities for Ag & Forestry	$76,828	$14,115,139	$752,386	0.0005%	0.0102%
211	**Oil and Gas Extraction**					
211111	Crude petroleum & natural gas extraction	$2,338,011	$194,107,252	$27,427,230	0.0012%	0.0085%
211112	Natural gas liquid extraction	$1,221,142	$39,759,759	$4,240,675	0.0031%	0.0288%
212	Mining (except Oil & Gas)	$343,013	$85,057,794	$9,746,773	0.0004%	0.0035%
213	Support Activities for Mining	$401,872	$76,426,643	$8,757,729	0.0005%	0.0046%
22	**Utilities**					
2211	Electric Power Gen, Trans & Distrib	$1,175,379	$440,342,284	$19,549,326	0.0003%	0.0060%
2212	Natural Gas Distribution	$191,395	$123,708,390	$3,685,326	0.0002%	0.0052%
2213	Water, Sewage, & Other Systems	$270,227	$9,718,520	$686,142	0.0028%	0.0394%
23	**Construction**					
236	Construction of Buildings	$5,352,275	$752,446,316	$36,618,886	0.0007%	0.0146%
237	Heavy Construction	$1,597,223	$263,941,774	$14,141,733	0.0006%	0.0113%
238	Special Trade Contractors	$11,820,847	$694,885,238	$29,258,246	0.0017%	0.0404%
31	**Manufacturing**					
311	Food Manufacturing	$3,849,737	$590,833,582	$42,400,282	0.0007%	0.0091%
312	Beverage &Tobacco Prod. Manuf.	$399,200	$129,351,188	$9,392,713	0.0003%	0.0043%
313	Textile Mills	$478,125	$36,618,365	$2,209,564	0.0013%	0.0216%
314	Textile Product Mills	$620,810	$30,812,321	$1,950,283	0.0020%	0.0318%
315	Apparel Manufacturing	$1,183,629	$28,919,587	$1,576,569	0.0041%	0.0751%
316	Leather & Allied Product Manufac.	$137,521	$6,176,905	$408,409	0.0022%	0.0337%
321	Wood Product Manufacturing	$1,814,486	$100,862,580	$3,029,150	0.0018%	0.0599%
322	Paper Manufacturing	$999,897	$178,253,064	$13,644,088	0.0006%	0.0073%
323	Printing and Related Support	$2,703,253	$101,636,174	$4,395,616	0.0027%	0.0615%
324	**Petroleum & Coal Prod. Manufac.**					
324110	Petroleum refineries	$857,053	$561,943,070	$63,921,180	0.0002%	0.0013%
324121	Asphalt paving mixture & block mfg	$1,739,097	$11,626,178	$1,056,581	0.0150%	0.1646%

Table VI-11.
Potential Economic Impacts (contined)

NAICS Code	Industry	Total Annualized Costs	Revenues ($1,000)	Profits ($1,000)	Costs as a Percent of Revenues	Costs as a Percent of Profits
324	**Petroleum & Coal Prod. Manufac.**					
324122	Asphalt shingle & coating materials mfg	$278,488	$8,041,234	$817,009	0.0035%	0.0341%
324191	Petroleum lubricating oil & grease mfg	$8,791,518	$10,555,336	$1,012,789	0.0833%	0.8681%
324199	All other petroleum & coal products mfg	$98,065	$3,074,898	$261,714	0.0032%	0.0375%
325	**Chemical Manufacturing**					
325110	Petrochemical mfg	$382,550	$68,708,581	$3,958,311	0.0006%	0.0097%
325120	Industrial gas mfg	$219,808	$9,232,158	$529,438	0.0024%	0.0415%
325131	Inorganic dye & pigment mfg	$86,028	$1,321,184	$58,848	0.0065%	0.1462%
325132	Synthetic organic dye & pigment mfg	$109,803	$2,306,790	$124,761	0.0048%	0.0880%
325181	Alkalies & chlorine mfg	$60,470	$2,070,537	$1,397	0.0029%	4.3288%
325182	Carbon black mfg	$24,436	$1,015,512	$44,680	0.0024%	0.0547%
325188	All other basic inorganic chemical mfg	$640,670	$24,054,601	$1,314,697	0.0027%	0.0487%
325191	Gum & wood chemical mfg	$174,122	$1,003,423	$8,228	0.0174%	2.1161%
325192	Cyclic crude & intermediate mfg	$22,176	$4,833,694	$263,177	0.0005%	0.0084%
325193	Ethyl alcohol mfg	$369,765	$14,109,202	$629,938	0.0026%	0.0587%
325199	All other basic organic chemical mfg	$1,256,135	$81,302,259	$4,535,032	0.0015%	0.0277%
325211	Plastics material & resin mfg	$1,213,772	$87,266,908	$7,003,511	0.0014%	0.0173%
325212	Synthetic rubber mfg	$65,234	$7,072,263	$547,222	0.0009%	0.0119%
325221	Cellulosic organic fiber mfg	$82,260	$637,425	$82,266	0.0129%	0.1000%
325222	Noncellulosic organic fiber mfg	$38,897	$8,839,294	$112,622	0.0004%	0.0345%
325311	Nitrogenous fertilizer mfg	$136,562	$585,053	$44,549	0.0233%	0.3065%
325312	Phosphatic fertilizer mfg	$68,888	$561,376	$55,219	0.0123%	0.1248%
325314	Fertilizer (mixing only) mfg	$265,983	$4,275,079	$439,383	0.0062%	0.0605%
325320	Pesticide & other agricultural chemical mfg	$309,460	$11,569,635	$1,386,836	0.0027%	0.0223%
325411	Medicinal & botanical mfg	$359,322	$12,382,775	$2,190,199	0.0029%	0.0164%
325412	Pharmaceutical preparation mfg	$1,613,993	$140,546,097	$25,658,040	0.0011%	0.0063%
325413	In-vitro diagnostic substance mfg	$517,308	$12,672,955	$2,246,114	0.0041%	0.0230%
325414	Biological product (except diagnostic) mfg	$246,509	$15,530,258	$2,778,785	0.0016%	0.0089%
325510	Paint & coating mfg	$4,044,937	$23,373,658	$1,544,543	0.0173%	0.2619%

Table VI-11.
Potential Economic Impacts (contined)

NAICS Code	Industry	Total Annualized Costs	Revenues ($1,000)	Profits ($1,000)	Costs as a Percent of Revenues	Costs as a Percent of Profits
325	**Chemical Manufacturing**					
325520	Adhesive mfg	$1,569,248	$9,369,131	$598,100	0.0167%	0.2624%
325611	Soap & other detergent mfg	$743,889	$28,868,302	$3,234,866	0.0026%	0.0230%
325612	Polish & other sanitation good mfg	$1,573,954	$2,817,533	$251,107	0.0559%	0.6268%
325613	Surface active agent mfg	$827,327	$8,598,086	$982,496	0.0096%	0.0842%
325620	Toilet preparation mfg	$4,210,615	$47,135,570	$5,409,708	0.0089%	0.0778%
325910	Printing ink mfg	$1,225,882	$4,926,921	$248,371	0.0249%	0.4936%
325920	Explosives mfg	$177,192	$1,533,712	$81,027	0.0116%	0.2187%
325991	Custom compounding of purchased resin	$189,058	$9,842,609	$487,531	0.0019%	0.0388%
325992	Photographic film, paper, plate, & chemical mfg	$1,678,379	$1,680,687	$70,697	0.0999%	2.3740%
325998	All other miscellaneous chemical product & preparation mfg	$2,923,955	$17,432,274	$855,116	0.0168%	0.3419%
326	Plastics and Rubber Products Man.	$3,946,975	$211,794,903	$8,613,650	0.0019%	0.0458%
327	Nonmetallic Mineral Prod. Manufac.	$3,191,048	$127,080,322	$7,536,185	0.0025%	0.0423%
331	Primary Metal Manufacturing	$1,657,589	$256,127,735	$12,805,335	0.0006%	0.0129%
332	Fabricated Metal Prod. Manufac.	$5,627,722	$340,156,176	$22,909,813	0.0017%	0.0246%
333	Machinery Manufacturing	$2,920,617	$350,737,442	$18,293,730	0.0008%	0.0160%
334	Computer & Electronic Prod Man.	$1,790,722	$398,480,943	$35,239,356	0.0004%	0.0051%
335	Electric Equipment, Appliance Man.	$984,903	$131,026,369	$7,867,355	0.0008%	0.0125%
336	Transportation Equip. Manufacturing	$3,341,277	$729,869,304	$12,565,992	0.0005%	0.0266%
337	Furniture & Related Product Man.	$2,028,962	$85,030,749	$3,863,061	0.0024%	0.0525%
339	Miscellaneous Manufacturing	$4,881,617	$152,756,397	$12,480,274	0.0032%	0.0391%
42	**Wholesale Trade**					
423	Durable Goods	$3,630,525	$2,654,764,252	$80,481,465	0.0001%	0.0045%
424	Nondurable Goods	$2,211,842	$2,728,235,496	$90,983,434	0.0001%	0.0024%
42469	Other Chemicals & AlliedProducts	$160,510	$119,569,684	$4,399,084	0.0001%	0.0036%
4247	Petroleum & petroleum Products	$149,722	$632,241,487	$14,072,944	0.0000%	0.0011%
42495	Paint, Varnish, & Supplies	$29,164	$11,652,375	$417,801	0.0003%	0.0070%
44-45	**Retail Trade**					
441	Motor vehicle & parts dealers	$2,819,848	$896,297,538	$12,960,719	0.0003%	0.0218%
442	Furniture & home furnishings stores	$605,846	$112,218,395	$4,285,143	0.0005%	0.0141%

Table VI-11.
Potential Economic Impacts (contined)

NAICS Code	Industry	Total Annualized Costs	Revenues ($1,000)	Profits ($1,000)	Costs as a Percent of Revenues	Costs as a Percent of Profits
44-45	**Retail Trade**					
443	Electronics & appliance stores	$214,291	$116,040,434	$4,606,634	0.0002%	0.0047%
444	Building material & garden equipment & supplies dealers	$1,043,592	$332,908,952	$18,542,776	0.0003%	0.0056%
445	Food & beverage stores	$1,385,780	$552,381,358	$11,470,403	0.0003%	0.0121%
446	Health & personal care stores	$2,106,469	$259,106,568	$8,632,167	0.0008%	0.0244%
447	Gasoline stations	$948,943	$440,453,786	$4,754,655	0.0002%	0.0200%
448	Clothing & clothing accessories stores	$180,872	$218,738,679	$12,836,726	0.0001%	0.0014%
451	Sporting goods, hobby, book, & music stores	$245,370	$90,896,739	$2,725,660	0.0003%	0.0090%
452	General merchandise stores	$845,951	$593,383,265	$25,254,843	0.0001%	0.0033%
453	Miscellaneous store retailers	$481,281	$113,121,052	$4,227,386	0.0004%	0.0114%
454	Nonstore retailers	$423,611	$240,557,361	$10,409,634	0.0002%	0.0041%
48-49	**Transportation & Warehousing**					
481	Air transportation	$157,700	$141,849,515	$4,225,370	0.0001%	0.0037%
483	Water transportation	$80,237	$34,792,652	$2,289,955	0.0002%	0.0035%
484	Truck transportation	$2,242,542	$222,171,220	$6,377,563	0.0010%	0.0352%
485	Transit & ground passenger transportation	$186,160	$26,996,179	$719,894	0.0007%	0.0259%
486	Pipeline transportation	$58,898	$51,731,994	$9,006,192	0.0001%	0.0007%
487	Scenic & sightseeing transportation	$21,106	$2,079,372	$91,971	0.0010%	0.0229%
488	Support activities for transportation	$730,164	$94,811,422	$3,565,908	0.0008%	0.0205%
492	Couriers & messengers	$477,958	$79,205,101	$3,347,468	0.0006%	0.0143%
493	Warehousing & storage	$710,804	$39,951,180	$2,008,338	0.0018%	0.0354%
51	**Information**					
511	Publishing industries	$488,321	$272,103,899	$36,222,133	0.0002%	0.0013%
512	Motion picture & sound recording industries	$73,979	$92,572,421	$6,235,408	0.0001%	0.0012%
515	Broadcasting (except Internet)	$632,002	$97,003,312	$7,291,773	0.0007%	0.0087%
516	Internet Publishing and Broadcasting	$667,782	$476,693,650	$34,119,337	0.0001%	0.0020%
517	Telecommunications	$110,474	$11,856,575	$877,197	0.0009%	0.0126%
518	Internet Service Providers, Web Search Portals, and Data Processing Services	$119,235	$103,179,812	$7,682,215	0.0001%	0.0016%
519	Other Information Services	$110,649	$7,267,258	$649,722	0.0015%	0.0170%

Table VI-11.
Potential Economic Impacts (contined)

NAICS Code	Industry	Total Annualized Costs	Revenues ($1,000)	Profits ($1,000)	Costs as a Percent of Revenues	Costs as a Percent of Profits
52	**Finance & Insurance**					
521	Monetary authorities - central bank	$1,285	n.a	$28,820,277	0.0000%	0.0000%
522	Credit intermediation & related activities	$113,998	$1,342,773,502	$130,826,298	0.0000%	0.0001%
523	Securities intermediation & related activities	$41,610	$659,358,364	$72,290,929	0.0000%	0.0001%
524	Insurance carriers & related activities	$796,367	$1,629,364,475	$90,009,012	0.0000%	0.0009%
525	Funds, trusts, & other financial vehicles (part)	$13,931	$25,762,873	$18,111,414	0.0001%	0.0001%
53	**Real Estate & Rental and Leasing**					
531	Real estate	$2,160,324	$314,825,826	$41,055,039	0.0007%	0.0053%
532	Rental & leasing services	$927,435	$124,190,956	$5,355,074	0.0007%	0.0173%
533	Lessors of intangible assets, except copyrighted works	$12,597	$22,608,698	$8,399,407	0.0001%	0.0001%
54	**Professional, Technical & Technical**					
5411	Legal services	$26,589	$241,585,199	$20,428,332	0.0000%	0.0001%
5412	Accounting, tax return prep, bookkeeping, & payroll services	$270,631	$118,782,462	$11,402,885	0.0002%	0.0024%
5413	Architectural, engineering, & related services	$496,068	$255,969,849	$12,019,122	0.0002%	0.0041%
5414	Specialized design services	$119,853	$24,121,488	$1,545,094	0.0005%	0.0078%
5415	Computer systems design & related services	$97,106	$274,090,856	$17,426,282	0.0000%	0.0006%
5416	Management, scientific, & technical consulting services	$398,017	$193,880,951	$15,369,087	0.0002%	0.0026%
5417	Scientific R&D Serv.	$179,829	$113,331,959	$10,576,659	0.0002%	0.0017%
5418	Advertising & related services	$221,661	$83,216,540	$4,677,880	0.0003%	0.0047%
5419	Other professional, scientific, & technical services	$1,630,779	$64,824,047	$4,751,515	0.0025%	0.0343%
55	**Management of Companies**					
551111	Offices of bank holding companies	$19,157	$8,527,652	$1,201,436	0.0002%	0.0016%
551112	Offices of other holding companies	$106,287	$90,565,832	$61,020,373	0.0001%	0.0002%
551114	Corporate, subsidiary, & regional managing offices	$994,284	$408,918,738	$61,510,353	0.0002%	0.0016%
56	**Adm and Support & Waste Managmt**					
561	Administrative and Support Serv.	$10,555,159	$574,904,018	$27,403,980	0.0018%	0.0385%
562	Wastemanagement & Remediation Serv.	$585,885	$71,019,564	$3,495,353	0.0008%	0.0168%
61	**Educational Services**					
6111	Elementary & secondary schools	$350,361	$61,987,431	$5,020,872	0.0006%	0.0070%
6112	Junior colleges	$17,713	$6,981,654	$614,509	0.0003%	0.0029%

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Table VI-11.
Potential Economic Impacts (contined)

NAICS Code	Industry	Total Annualized Costs	Revenues ($1,000)	Profits ($1,000)	Costs as a Percent of Revenues	Costs as a Percent of Profits
61	**Educational Services**					
6113	Colleges, universities, & profesional schools	$379,536	$165,761,113	$15,105,707	0.0002%	0.0025%
6114	Business schools, & computer & management training	$5,402	$9,493,068	$751,863	0.0001%	0.0007%
6115	Technical & trade schools	$38,174	$12,814,336	$1,068,596	0.0003%	0.0036%
6116	Other schools & instruction	$41,970	$16,556,465	$1,276,691	0.0003%	0.0033%
6117	Educational support services	$19,436	$10,672,499	$874,480	0.0002%	0.0022%
62	**Healthcare and Social Assistance**					
621	Ambulatory health care services	$15,384,229	$689,559,289	$36,230,870	0.0022%	0.0425%
622	Hospitals	$9,007,477	$695,851,749	$49,446,288	0.0013%	0.0182%
623	Nursing & residential care facilities	$5,336,703	$166,581,075	$10,579,315	0.0032%	0.0504%
624	Social assistance	$2,184,913	$127,324,825	$6,883,194	0.0017%	0.0317%
71	**Arts, Entertainment & Recreation**					
711	Performing arts, spectator sports, & related industries	$195,454	$78,496,916	$7,757,623	0.0002%	0.0025%
712	Museums, historical sites, & similar institutions	$57,925	$13,015,709	$1,046,388	0.0004%	0.0055%
713	Amusement, gambling, & recreation industries	$890,503	$104,539,320	$7,212,443	0.0009%	0.0123%
72	**Accommodation & Food Services**					
721	Accommodation	$1,906,424	$174,493,191	$11,640,221	0.0011%	0.0164%
722	Foodservices & drinking places	$809,336	$435,982,331	$21,820,336	0.0002%	0.0037%
81	**Other Services**					
811	Repair & maintenance	$5,117,315	$156,086,726	$6,134,849	0.0033%	0.0834%
811121	Automotive body, paint, & interior repair & maintenance	$471,055	$26,554,038	$868,428	0.0018%	0.0542%
812	Personal & laundry services	$2,722,109	$85,934,630	$4,719,981	0.0032%	0.0577%
812320	Drycleaning & laundry services (except coin-operated)	$391,302	$8,401,076	$432,114	0.0047%	0.0906%
812921	Photofinishing laboratories (except one-hour)	$39,919	$1,303,716	$71,376	0.0031%	0.0559%
813	Religious/grantmaking/civic/professional & similar org	$1,587,877	$335,201,310	$7,891,029	0.0005%	0.0201%
99	**State and Local Government**					
9992	State Government	$628,158	n.a.			
9993	Local Government	$2,564,598	n.a.			
	Total	**$200,980,794**	**$29,850,968,070**	**$1,792,406,985**		

Note: Costs are expressed in 2010 dollars
Source: Office of Regulatory Analysis, OSHA based on PP&E (2009) and ERG (2012)

In profit-earning entities, compliance costs can generally be expected to be absorbed through a combination of increases in prices and reductions in profits. The extent to which the impacts of cost increases affect prices or profits depend on the price elasticity of demand for the products or services produced and sold by the entity.

The price elasticity of demand refers to the relationship between changes in the price charged for a product and the resulting changes in the demand for that product. A larger price elasticity of demand implies that an entity or industry is less able to pass increases in costs through to its customers in the form of a price increase and must absorb more of the cost increase through a reduction in profits.

In the case of cost increases that may be incurred due to the requirements of the final rule, all businesses within each of the covered industry sectors would be subject to the same requirements. Thus, to the extent potential price increases correspond to costs associated with achieving compliance with the standards, the elasticity of demand for each entity will approach that faced by the industry as a whole.

Given the small increases in prices potentially resulting from compliance with the final rule and the lack of readily available substitutes for the products and services provided by the covered industry sectors, demand is expected to be sufficiently inelastic in each affected industry to enable entities to substantially offset compliance costs through minor price increases without experiencing any significant reduction in revenues or profits.

OSHA expects the overall economic impact of the final rule to be both an increase in the efficiency of production of goods and services and an improvement in the welfare of society.

First, as demonstrated by the analysis of costs and benefits associated with compliance with the requirements of the final rule, OSHA expects that societal welfare will increase as a result of the revisions to the HCS, as the benefits far exceed compliance costs. The final rule is estimated to yield net annualized benefits of over $800 million.

Second, until now, many of the costs associated with the injuries, illnesses, and fatalities resulting from the risks addressed by the final rule have been externalized. For example, the costs incurred by society to supply certain products and services that are accompanied by injuries, illnesses, or fatalities from employee exposure to hazardous chemicals have not been fully reflected in the prices of those products and services. To the extent that fewer of these costs are externalized because of improved employer and employee information about hazardous chemicals in the workplace, the price mechanism will enable the market to produce a more efficient allocation of resources. However, reductions in externalities by themselves do not necessarily increase efficiency or social welfare unless the costs of achieving the reductions (including indirect and unintended consequences of regulatory approaches) are outweighed by the associated benefits, as they are in this instance.

In addition, based on an analysis of the costs and economic impacts associated with this rulemaking, OSHA concludes that the effects of the final rule on employment, wages, and economic growth for the United States would be negligible. This final rule is expected to result in increased import and export opportunities with U.S. trading partners due to the harmonization of the U.S. system with GHS. Hence, the primary effect on international trade, for businesses of all size, is likely to be favorable. This determination was supported by comment in the rulemaking record. For example, the Society of Chemical Manufacturers and Affiliates reported that companies that do business globally would see benefits related to the revisions to the OSHA HCS (Document ID #0402). Other stakeholders anticipate benefits related to global harmonization (Document ID #0382, 0388, 0393, and 0405) and mention that the standardization of the HCS will benefit those who are involved in international trade (Document ID #0410).

Statement of Energy Effects

As required by Executive Order 13211, and in accordance with the guidance for implementing Executive Order 13211 and with the definitions provided therein as prescribed by the Office of Management and Budget (OMB), OSHA has analyzed the standard with regard to its potential to have a significant adverse effect on the supply, distribution, or use of energy.

As a result of this analysis, OSHA has determined that this action is not a significant energy action as defined by the relevant OMB guidance.

I. Final Regulatory Flexibility Screening Analysis

The Regulatory Flexibility Act (5 U.S.C. 601–612), as amended in 1996, requires the preparation of a Final Regulatory Flexibility Analysis (FRFA) for rules where there would be a significant economic impact on a substantial number of small firms. Under the provisions of the law, each such analysis shall contain:

1. A description of the impact of the rule on small entities;

2. A statement of the need for, and objectives of, the rule;

3. The response of the agency to any comments filed by the Chief Counsel for Advocacy of the Small Business Administration in response to the proposed rule, and a detailed statement of any change made to the proposed rule in the final rule as a result of the comments;

4. A statement of the significant issues raised by the public comments in response to the initial regulatory flexibility analysis, a statement of the assessment of the agency of such issues, and a statement of any changes made in the proposed rule as a result of such comments;

5. A description of and an estimate of the number of small entities to which the rule will apply or an explanation of why no such estimate is available;

6. A description of the projected reporting, recordkeeping and other compliance requirements of the rule, including an estimate of the classes of small entities which will be subject to the requirements and the type of professional skills necessary for preparation of the report or record; and

7. A description of the steps the agency has taken to minimize the significant economic impact on small entities consistent with the stated objectives of the applicable statutes, including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each one of the other significant alternatives to the rule considered by the agency which affect the impact on small entities was rejected.

The Regulatory Flexibility Act further states that the required elements of the FRFA may be performed in conjunction with or as part of any other agenda or analysis required by any other law if such other analysis satisfies the relevant provisions (5 U.S.C. 605(a)).

As explained below, OSHA believes that the final rule will not have a significant economic impact on a substantial number of small entities, and therefore a FRFA is not required by the Regulatory Flexibility Act. Nonetheless, OSHA has prepared this voluntary FRFA to assure the regulated community that the agency has considered the impacts of the final rule on small entities. While a full understanding of OSHA's analysis and conclusions with respect to costs and economic impacts on small businesses requires a reading of the complete FEA

and its supporting materials, this voluntary FRFA will summarize the key aspects of OSHA's analysis as they affect small businesses.

1. A Description of the Impact of the Final Rule on Small Entities

The final regulation requires classification of chemicals, especially chemical mixtures, somewhat different from current hazard determination methods; a standardized format for the organization of MSDSs (now called SDSs); standardized labels and standardized pictograms; and training for affected employees on these changes. (Some commenters argued that GHS would also impose more stringent testing requirements, but as explained in Section III: Need and Support in this preamble, the HCS does not currently require testing of chemicals, and will not require testing with adoption of the GHS.[30])

For the purpose of its cost analysis, OSHA estimated four types of cost:

(1) Costs to chemical producers of classifying chemicals, reformatting SDSs, and developing new labels;

(2) Costs for safety and health managers and logistics personnel to familiarize themselves with the standard (although not required by the regulation, this is a necessary step in its implementation);

(3) Costs of training affected employees on how to find the information they need on SDSs and to comprehend pictograms and standard labels; and

(4) Costs to upgrade printing technology or purchase multi-colored labels to comply with the requirement that the pictograms be presented in a red-bordered diamond.

OSHA believes that, with the exception of the cost of color printing ink or printing cartridges or the cost of purchasing color pre-printed labels, these costs are a one-time cost that would be incurred during the four-year transition period after the final rule is published. OSHA anticipates that, once the final rule is implemented, the costs under the revised OSHA HCS will be only marginally higher than the costs under the existing HCS system and consist solely of the costs associated with color printing supplies. Once chemical producers, distributors, and users set up for and shift to the GHS system, OSHA expects there will be no additional costs arising from the final rule for classification, SDSs, and labeling.

OSHA also anticipates that, after the four-year transition period, the revisions to the HCS—resulting in more consistent chemical classifications and more uniform SDSs and labels—will yield production efficiencies for health and safety managers, logistics personnel, and others who handle hazardous chemicals. These cost savings (in addition to the health benefits for affected workers arising from this final rule) are considered in Section VI.D: Benefits in this preamble.

OSHA's criteria for determining whether there are significant economic impacts on a substantial number of small firms are that, for small entities in any given industry, the annualized costs exceed 1 percent of revenues or 5 percent of profits. All of OSHA's calculations of the economic impacts on small firms totally ignore any offsetting benefits of any kind, even though OSHA estimates that, for most small firms, the benefits of this rule will actually exceed the costs.

OSHA's industry-by-industry analysis, both for small firms (as defined by SBA) and for very small firms (defined by OSHA as those with fewer than 20 employees), shows that in no industry size class do the annualized costs exceed 0.28 percent of revenues or 3.3 percent of profits, and in almost all cases the annualized costs for small and very small firms are below 0.01 percent of revenues and 0.1 percent of profits. For affected small firms as defined by SBA, the average annualized cost per firm of the final rule would be $52 per year, which is equal to 0.001 percent of annual revenue and 0.03 percent of annual profit for the average firm. In terms of chemical-producing industries only, the average annualized cost per small firm as defined by SBA would be $544 per year, which is equal to 0.004 percent of annual revenue and 0.03 percent of annual profit for such a firm. For affected firms with fewer than 20 employees, the average annualized cost per firm of the final rule would be $35 per year (or 0.002 percent of annual revenue and 0.04 percent of annual profit), and the average annualized cost per firm that produces chemicals would be $255 per year (or 0.02 percent of annual revenue and 0.2 percent of annual profit).

Given these results, OSHA concludes that the final rule will not have a significant economic impact on a substantial number of small entities. Thus, a FRFA is not required for this rulemaking. However, recognizing the possible value that such an analysis may provide, OSHA has voluntarily included the elements of the FRFA as part of this Regulatory Flexibility Analysis (RFA) and has analyzed the potential impact of the revisions to OSHA's HCS on small entities. As described in Section VI.D Benefits in this preamble, the revisions to the HCS, on the whole, are expected to result in significant net benefits to employers, as the associated cost savings outweigh the corresponding compliance costs. This same conclusion generally applies to the small entities affected by the final rule.

In order to ensure that any potential significant adverse impact on a substantial number of small entities would be appropriately considered, OSHA also specifically evaluated the impact on small entities of the costs of compliance alone, without regard to the associated cost savings and health and safety benefits.

The total annualized cost of compliance with the final rule for small entities is estimated to be approximately $119 million, as shown by industry in Table VI–12.

To assess the potential economic impact of the final rule on small entities, OSHA calculated the ratios of compliance costs to profits and to revenues. These ratios are presented for each affected industry in Table VI–12. OSHA expects that among small entities potentially affected by the final rule, the average increase in prices necessary to completely offset the compliance costs would be 0.0013 percent. The average price increase necessary to completely offset compliance costs would not exceed 0.18 percent among small entities in any single affected industry sector.

In the event that no costs could be passed through, the compliance costs could be completely absorbed through an average reduction in profits of less than 0.03 percent for affected small entities. For small entities in most affected industries, the compliance costs could be completely absorbed through an average reduction in profits of less than 0.3 percent; the reduction in profits would be no more than 3.3 percent among small entities in any of the affected industries.

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[30] OSHA's estimation methodology assumes that firms will undertake the most cost effective method of complying with an OSHA requirement. Therefore, if firms choose to perform testing or to incur other costs not required by an OSHA rule they do so only because they feel there is some benefit to be gained.

Table VI-12.
Potential Impacts on Small Entities

NAICS Code	Industry	Number of Small Firms	Number of Affected Small Firms	Total Annualized Costs	Revenues ($1,000)	Profits ($1,000)	Costs as a Percent of Revenues	Costs as a Percent of Profits
11	**Agriculture, Forestry, Fishing & Hunting**							
113	Forestry & Logging	10,246	10,246	$152,247	$9,836,325	$368,480	0.0015%	0.0413%
114	Fishing, Hunting and Trappinig	2,330	809	$13,810	$1,274,953	$64,857	0.0011%	0.0213%
115	Support Activities for Ag & Forestry	10,056	4,197	$60,431	$8,440,938	$399,639	0.0007%	0.0151%
211	**Oil and Gas Extraction**							
211111	Crude petroleum & natural gas extraction	6,329	6,329	$1,921,467	$44,965,936	$6,353,658	0.0043%	0.0302%
211112	Natural gas liquid extraction	98	89	$63,723	$1,946,346	$233,417	0.0033%	0.0273%
212	Mining (except Oil & Gas)	4,296	4,296	$162,506	$20,126,179	$2,306,259	0.0008%	0.0070%
213	Support Activities for Mining	9,338	9,338	$180,086	$15,740,489	$1,803,703	0.0011%	0.0100%
22	**Utilities**							
2211	Electric Power Gen, Trans & Distrib	630	630	$32,858	$8,364,773	$371,360	0.0004%	0.0088%
2212	Natural Gas Distribution	433	433	$34,500	$21,621,345	$644,109	0.0002%	0.0054%
2213	Water, Sewage, & Other Systems	3,918	3,917	$215,732	$3,224,965	$227,687	0.0067%	0.0947%
23	**Construction**							
236	Construction of Buildings	240,886	240,886	$4,829,965	$455,390,191	$22,162,221	0.0011%	0.0218%
237	Heavy Construction	48,219	48,219	$1,142,904	$152,413,886	$8,166,182	0.0007%	0.0140%
238	Special Trade Contractors	505,012	505,012	$10,546,673	$521,088,838	$21,272,768	0.0020%	0.0496%
31	**Manufacturing**							
311	Food Manufacturing	21,036	21,036	$1,915,874	$134,452,295	$8,003,031	0.0014%	0.0239%
312	Beverage &Tobacco Prod. Manuf.	3,381	3,381	$230,228	$15,816,393	$979,511	0.0015%	0.0235%
313	Textile Mills	2,574	2,574	$273,603	$13,365,687	$604,503	0.0020%	0.0453%
314	Textile Product Mills	6,387	6,387	$488,724	$12,133,267	$477,482	0.0040%	0.1024%
315	Apparel Manufacturing	10,073	10,073	$987,297	$21,123,838	$1,006,901	0.0047%	0.0981%
316	Leather & Allied Product Manufac.	1,317	1,317	$105,795	$3,537,287	$224,500	0.0030%	0.0471%
321	Wood Product Manufacturing	14,365	14,365	$1,383,328	$54,672,850	$2,401,003	0.0025%	0.0576%
322	Paper Manufacturing	3,066	3,066	$423,100	$34,882,374	$1,638,919	0.0012%	0.0258%
323	Printing and Related Support	31,414	31,414	$2,309,226	$58,682,825	$2,628,148	0.0039%	0.0879%
324	**Petroleum & Coal Prod. Manufac.**							
324110	Petroleum refineries	241	241	$585,772	$343,480,378	$38,324,378	0.0002%	0.0015%
324121	Asphalt paving mixture & block mfg	430	430	$801,750	$4,836,036	$272,923	0.0166%	0.2938%

Table VI-12.

Potential Impacts on Small Entities (continued)

NAICS Code	Industry	Number of Small Firms	Number of Affected Small Firms	Total Annualized Costs	Revenues ($1,000)	Profits ($1,000)	Costs as a Percent of Revenues	Costs as a Percent of Profits
324	**Petroleum & Coal Prod. Manufac.**							
324122	Asphalt shingle & coating materials mfg	115	115	$179,338	$3,595,398	$303,910	0.0050%	0.0590%
324191	Petroleum lubricating oil & grease m	261	261	$5,967,934	$3,354,088	$181,685	0.1779%	3.2848%
324199	All other petroleum & coal products mfg	57	57	$69,289	$1,458,119	$75,120	0.0048%	0.0922%
325	**Chemical Manufacturing**							
325110	Petrochemical mfg	31	29	$181,400	$29,725,040	$1,708,872	0.0006%	0.0106%
325120	Industrial gas mfg	80	60	$118,752	$4,034,594	$229,527	0.0029%	0.0517%
325131	Inorganic dye & pigment mfg	64	59	$56,498	$1,321,184	$58,848	0.0043%	0.0960%
325132	Synthetic organic dye & pigment mfg	81	81	$78,237	$1,061,363	$52,897	0.0074%	0.1479%
325181	Alkalies & chlorine mfg	27	0	$44,964	$48,418	$1,397	0.0929%	3.2188%
325182	Carbon black mfg	7	0	$12,707	$710,858	$27,248	0.0018%	0.0466%
325188	All other basic inorganic chemical mfg	341	341	$425,853	$13,318,592	$695,205	0.0032%	0.0613%
325191	Gum & wood chemical mfg	36	36	$85,876	$200,485	$8,228	0.0428%	1.0437%
325192	Cyclic crude & intermediate mfg	20	20	$14,177	$1,416,764	$79,692	0.0010%	0.0178%
325193	Ethyl alcohol mfg	216	216	$337,532	$13,161,681	$575,264	0.0026%	0.0587%
325199	All other basic organic chemical mfg	478	478	$743,895	$41,617,066	$2,245,107	0.0018%	0.0331%
325211	Plastics material & resin mfg	500	500	$688,376	$33,067,342	$2,518,534	0.0021%	0.0273%
325212	Synthetic rubber mfg	114	114	$46,081	$4,221,987	$311,363	0.0011%	0.0148%
325221	Cellulosic organic fiber mfg	14	14	$76,023	$429,194	$43,195	0.0177%	0.1760%
325222	Noncellulosic organic fiber mfg	76	76	$23,084	$1,730,191	$112,622	0.0013%	0.0205%
325311	Nitrogenous fertilizer mfg	124	111	$88,829	$585,053	$44,549	0.0152%	0.1994%
325312	Phosphatic fertilizer mfg	22	9	$9,057	$561,376	$55,219	0.0016%	0.0164%
325314	Fertilizer (mixing only) mfg	325	325	$202,591	$2,703,733	$241,777	0.0075%	0.0838%
325320	Pesticide & other agricultural chemical mfg	160	160	$129,539	$2,278,731	$218,450	0.0057%	0.0593%
325411	Medicinal & botanical mfg	318	318	$217,086	$5,118,970	$843,230	0.0042%	0.0257%
325412	Pharmaceutical preparation mfg	719	719	$766,973	$47,353,816	$8,376,866	0.0016%	0.0092%
325413	In-vitro diagnostic substance mfg	174	174	$196,479	$2,338,572	$329,751	0.0084%	0.0596%
325414	Biological product (except diagnostic) mfg	186	186	$75,989	$1,981,852	$266,427	0.0038%	0.0285%
325510	Paint & coating mfg	1,033	1,033	$2,018,090	$5,715,541	$292,490	0.0353%	0.6900%

Table VI-12.
Potential Impacts on Small Entities (continued)

NAICS Code	Industry	Number of Small Firms	Number of Affected Small Firms	Total Annualized Costs	Revenues ($1,000)	Profits ($1,000)	Costs as a Percent of Revenues	Costs as a Percent of Profits
325	**Chemical Manufacturing**							
325520	Adhesive mfg	396	396	$934,519	$3,501,061	$182,023	0.0267%	0.5134%
325611	Soap & other detergent mfg	631	631	$518,718	$12,171,708	$1,234,837	0.0043%	0.0420%
325612	Polish & other sanitation good mfg	484	484	$754,448	$2,817,533	$251,107	0.0268%	0.3004%
325613	Surface active agent mfg	105	105	$322,753	$1,532,779	$136,166	0.0211%	0.2370%
325620	Toilet preparation mfg	716	716	$1,379,246	$7,105,015	$614,583	0.0194%	0.2244%
325910	Printing ink mfg	229	229	$640,692	$1,690,209	$69,214	0.0379%	0.9257%
325920	Explosives mfg	39	34	$100,467	$623,408	$30,640	0.0161%	0.3279%
325991	Custom compounding of purchased resin	437	437	$123,876	$4,008,676	$164,614	0.0031%	0.0753%
325992	Photographic film, paper, plate, & chemical mfg	368	368	$347,252	$1,680,687	$70,697	0.0207%	0.4912%
325998	All other miscellaneous chemical product &	1,002	1,002	$1,806,834	$7,182,713	$287,788	0.0252%	0.6278%
326	Plastics and Rubber Products Man.	10,576	10,576	$2,328,247	$72,020,363	$2,652,803	0.0032%	0.0878%
327	Nonmetallic Mineral Prod. Manufac.	11,059	11,059	$1,926,055	$45,869,413	$2,441,681	0.0042%	0.0789%
331	Primary Metal Manufacturing	4,070	4,070	$1,064,547	$110,979,728	$5,398,756	0.0010%	0.0197%
332	Fabricated Metal Prod. Manufac.	54,741	54,741	$4,676,924	$191,740,016	$8,416,483	0.0024%	0.0556%
333	Machinery Manufacturing	23,002	23,002	$2,017,492	$113,920,817	$5,370,764	0.0018%	0.0376%
334	Computer & Electronic Prod Man.	12,114	12,114	$1,053,509	$74,123,407	$4,884,417	0.0014%	0.0216%
335	Electric Equipment, Appliance Man.	5,074	5,074	$631,876	$61,849,868	$3,379,023	0.0010%	0.0187%
336	Transportation Equip. Manufacturing	10,295	10,295	$1,787,347	$266,882,922	$5,362,478	0.0007%	0.0333%
337	Furniture & Related Product Man.	20,762	20,762	$1,625,554	$41,713,192	$1,895,086	0.0039%	0.0858%
339	Miscellaneous Manufacturing	29,427	29,427	$4,045,036	$66,380,767	$5,423,342	0.0061%	0.0746%
42	**Wholesale Trade**							
423	Durable Goods	172,208	172,208	$2,157,709	$769,593,467	$24,381,098	0.0003%	0.0088%
424	Nondurable Goods	98,410	98,410	$1,309,223	$667,258,422	$19,185,635	0.0002%	0.0068%
42469	Other Chemicals & AlliedProducts	5,845	5,845	$80,895	$34,598,095	$1,075,989	0.0002%	0.0075%
4247	Petroleum & petroleum Products	4,387	4,387	$94,058	$174,676,116	$3,488,008	0.0001%	0.0027%
42495	Paint, Varnish, & Supplies	1,132	1,132	$18,385	$3,242,433	$100,826	0.0006%	0.0182%
44-45	**Retail Trade**							
441	Motor vehicle & parts dealers	79,058	79,058	$1,435,007	$208,068,124	$3,008,725	0.0007%	0.0477%
442	Furniture & home furnishings stores	45,956	45,179	$359,302	$54,830,969	$1,838,793	0.0007%	0.0195%

Table VI-12.

Potential Impacts on Small Entities (continued)

NAICS Code	Industry	Number of Small Firms	Number of Affected Small Firms	Total Annualized Costs	Revenues ($1,000)	Profits ($1,000)	Costs as a Percent of Revenues	Costs as a Percent of Profits
44-45	**Retail Trade**							
443	Electronics & appliance stores	30,345	12,027	$92,961	$33,194,347	$1,078,567	0.0003%	0.0086%
444	Building material & garden equipment &	59,222	59,222	$553,160	$107,347,788	$6,860,520	0.0005%	0.0081%
445	Food & beverage stores	114,512	65,895	$621,110	$127,787,344	$2,653,551	0.0005%	0.0234%
446	Health & personal care stores	43,238	43,238	$986,114	$74,326,476	$2,014,147	0.0013%	0.0490%
447	Gasoline stations	65,603	38,180	$516,264	$200,352,348	$1,872,251	0.0003%	0.0276%
448	Clothing & clothing accessories stores	66,367	6,087	$44,022	$50,650,932	$2,500,586	0.0001%	0.0018%
451	Sporting goods, hobby, book, & music stores	40,723	10,564	$100,751	$29,618,620	$888,154	0.0003%	0.0113%
452	General merchandise stores	10,285	2,988	$166,375	$6,961,451	$296,285	0.0024%	0.0562%
453	Miscellaneous store retailers	97,023	42,338	$321,289	$66,883,652	$2,220,417	0.0005%	0.0145%
454	Nonstore retailers	36,997	29,321	$205,662	$47,685,007	$1,768,922	0.0004%	0.0116%
48-49	**Transportation & Warehousing**							
481	Air transportation	2,852	1,698	$93,300	$74,988,885	$2,233,746	0.0001%	0.0042%
483	Water transportation	1,441	1,441	$62,171	$22,192,914	$1,460,675	0.0003%	0.0043%
484	Truck transportation	104,588	104,588	$1,387,829	$98,730,297	$2,229,347	0.0014%	0.0623%
485	Transit & ground passenger transportation	15,195	7,158	$123,189	$12,585,993	$284,243	0.0010%	0.0433%
486	Pipeline transportation	203	203	$31,176	$26,611,123	$4,571,907	0.0001%	0.0007%
487	Scenic & sightseeing transportation	2,641	1,922	$19,327	$1,817,370	$76,124	0.0011%	0.0254%
488	Support activities for transportation	29,382	29,382	$425,546	$37,836,198	$1,098,079	0.0011%	0.0388%
492	Couriers & messengers	8,025	8,025	$109,385	$7,908,051	$259,301	0.0014%	0.0422%
493	Warehousing & storage	7,650	7,650	$814,857	$44,887,109	$2,256,466	0.0018%	0.0361%
51	**Information**							
511	Publishing industries	22,414	16,449	$259,117	$60,181,512	$7,517,596	0.0004%	0.0034%
512	Motion picture & sound recording industries	20,942	3,249	$23,613	$20,440,179	$1,376,791	0.0001%	0.0017%
515	Broadcasting (except Internet)	5,188	2,179	$73,009	$8,205,091	$533,608	0.0009%	0.0137%
516	Internet Publishing and Broadcasting	8,649	1,812	$73,877	$25,767,514	$1,590,427	0.0003%	0.0046%
517	Telecommunications	2,262	288	$24,775	$2,979,262	$220,418	0.0008%	0.0112%
518	Internet Service Providers, Web Search Portals,	10,751	1,806	$26,351	$14,993,732	$1,116,353	0.0002%	0.0024%
519	Other Information Services	3,313	516	$24,998	$2,252,632	$201,394	0.0011%	0.0124%

Table VI-12.
Potential Impacts on Small Entities (continued)

NAICS Code	Industry	Number of Small Firms	Number of Affected Small Firms	Total Annualized Costs	Revenues ($1,000)	Profits ($1,000)	Costs as a Percent of Revenues	Costs as a Percent of Profits
52	**Finance & Insurance**							
521	Monetary authorities - central bank	0	0	$0	$0	$0	0.0000%	0.0000%
522	Credit intermediation & related activities	60,048	2,192	$16,041	$89,109,389	$6,952,079	0.0000%	0.0002%
523	Securities intermediation & related activities	54,907	849	$6,038	$65,856,935	$5,859,352	0.0000%	0.0001%
524	Insurance carriers & related activities	135,579	11,260	$174,227	$89,352,496	$4,156,905	0.0002%	0.0042%
525	Funds, trusts, & other financial vehicles (part)	1,974	150	$2,343	$4,664,777	$1,885,761	0.0001%	0.0001%
53	**Real Estate & Rental and Leasing**							
531	Real estate	267,658	215,505	$1,616,953	$187,937,841	$23,086,814	0.0009%	0.0070%
532	Rental & leasing services	27,586	27,586	$348,599	$30,435,251	$1,540,815	0.0011%	0.0226%
533	Lessors of intangible assets, except copyrighted	2,139	465	$4,659	$4,332,716	$808,598	0.0001%	0.0006%
54	**Professional, Technical & Technical**							
5411	Legal services	180,282	3,686	$18,327	$131,471,964	$5,815,833	0.0000%	0.0003%
5412	Accounting, tax return prep, bookkeeping, &	107,326	11,319	$115,574	$53,299,161	$2,963,976	0.0002%	0.0039%
5413	Architectural, engineering, & related services	98,949	24,341	$283,871	$102,067,890	$5,442,612	0.0003%	0.0052%
5414	Specialized design services	34,309	10,673	$113,201	$22,038,259	$1,411,654	0.0005%	0.0080%
5415	Computer systems design & related services	102,538	4,213	$38,852	$91,647,874	$4,371,825	0.0000%	0.0009%
5416	Management, scientific, & technical consulting	141,395	24,597	$258,781	$93,714,829	$7,937,161	0.0003%	0.0033%
5417	Scientific R&D Serv.	12,707	4,669	$68,909	$21,694,585	$1,644,682	0.0003%	0.0042%
5418	Advertising & related services	36,283	12,502	$146,165	$42,872,501	$2,621,856	0.0003%	0.0056%
5419	Other professional, scientific, & technical	64,194	64,194	$1,392,920	$45,338,083	$3,493,218	0.0031%	0.0399%
55	**Management of Companies**							
551111	Offices of bank holding companies	830	558	$8,962	$2,964,016	$379,227	0.0003%	0.0024%
551112	Offices of other holding companies	4,912	1,897	$30,901	$14,310,160	$8,492,350	0.0002%	0.0004%
551114	Corporate, subsidiary, & regional managing	14,364	13,507	$240,472	$58,659,988	$8,691,221	0.0004%	0.0028%
56	**Adm and Support & Waste Managmt**							
561	Administrative and Support Serv.	304,301	304,301	$5,370,593	$227,889,399	$9,566,172	0.0024%	0.0561%
562	Wastemanagement & Remediation Serv.	16,657	16,657	$342,365	$23,646,581	$1,025,723	0.0014%	0.0334%

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Table VI-12.
Potential Impacts on Small Entities (continued)

NAICS Code	Industry	Number of Small Firms	Number of Affected Small Firms	Total Annualized Costs	Revenues ($1,000)	Profits ($1,000)	Costs as a Percent of Revenues	Costs as a Percent of Profits
61	**Educational Services**							
6111	Elementary & secondary schools	17,140	14,387	$271,863	$37,258,439	$2,956,637	0.0007%	0.0092%
6112	Junior colleges	316	231	$5,207	$970,101	$76,725	0.0005%	0.0068%
6113	Colleges, universities, & profesional schools	1,286	921	$20,190	$3,447,935	$270,829	0.0006%	0.0075%
6114	Business schools, & computer & management	6,839	494	$3,446	$5,885,007	$437,603	0.0001%	0.0008%
6115	Technical & trade schools	6,496	2,291	$25,476	$5,860,893	$441,780	0.0004%	0.0058%
6116	Other schools & instruction	35,900	4,486	$37,834	$13,872,429	$1,029,560	0.0003%	0.0037%
6117	Educational support services	5,921	823	$8,820	$4,622,266	$346,007	0.0002%	0.0025%
62	**Healthcare and Social Assistance**							
621	Ambulatory health care services	461,437	461,437	$11,286,651	$415,676,932	$17,219,892	0.0027%	0.0655%
622	Hospitals	961	961	$96,151	$4,659,947	$240,223	0.0021%	0.0400%
623	Nursing & residential care facilities	31,089	31,089	$1,274,167	$28,852,719	$1,335,763	0.0044%	0.0954%
624	Social assistance	110,507	86,080	$1,684,945	$87,629,512	$4,202,145	0.0019%	0.0401%
71	**Arts, Entertainment & Recreation**							
711	Performing arts, spectator sports, & related	42,712	14,018	$137,719	$35,801,342	$2,591,141	0.0004%	0.0053%
712	Museums, historical sites, & similar institutions	6,576	3,657	$40,810	$5,981,405	$389,268	0.0007%	0.0105%
713	Amusement, gambling, & recreation industries	65,299	53,347	$643,395	$49,529,622	$2,659,395	0.0013%	0.0242%
72	**Accommodation & Food Services**							
721	Accommodation	51,868	51,868	$1,103,859	$48,606,638	$2,289,522	0.0023%	0.0482%
722	Foodservices & drinking places	422,579	70,090	$518,022	$269,701,070	$12,083,561	0.0002%	0.0043%
81	**Other Services**							
811	Repair & maintenance	207,377	207,377	$4,629,491	$115,538,920	$4,197,153	0.0040%	0.1103%
811121	Automotive body, paint, & interior repair &	34,555	34,555	$444,618	$24,330,099	$774,830	0.0018%	0.0574%
812	Personal & laundry services	172,370	132,036	$2,162,047	$56,775,410	$2,829,275	0.0038%	0.0764%
812320	Drycleaning & laundry services (except coin-	23,148	20,821	$384,463	$8,081,256	$411,110	0.0048%	0.0935%
812921	Photofinishing laboratories (except one-hour)	1,027	913	$26,634	$917,908	$46,038	0.0029%	0.0579%
813	Religious/grantmaking/civic/professional &	293,086	122,396	$1,401,313	$240,527,375	$4,988,954	0.0006%	0.0281%
99	**State and Local Government**							
9992	State Government	n.a						
9993	Local Government	n.a						
	Total	**6,011,415**	**4,093,543**	**$119,242,319**	**$9,259,608,057**	**$461,323,810**		
	Total for firms producing SDSs	**72,142**	**72,040**	**$32,496,969**	**$954,172,574**	**$83,927,479**		
	Total for firms not producing SDSs	**5,939,273**	**4,021,503**	**$86,745,350**	**$8,305,435,483**	**$377,396,331**		

Note: Costs are expressed in 2010 dollars
Source: Office of Regulatory Analysis, OSHA based on ERG (2012)

To further evaluate the potential for any adverse effects on small entities resulting from the final rule, OSHA assessed the short-term impacts that may be associated with the compliance costs during the transition period.

The total non-annualized compliance costs for small entities during the four-year transition period are estimated to be $1,330 million, or about $333 million per year for four years. Thus, the potential temporary impact would be about 0.004 percent of revenues or about 0.07 percent of profits, on average, per year for four years for affected small entities.

In order to further ensure that potential impacts on small entities were fully analyzed and considered, OSHA also separately examined the potential impacts of the final rule on very small entities, defined as those with fewer than 20 employees. As shown in Table VI–13, the total annualized costs for entities in this size class would be an estimated $67 million. The annualized costs represent about 0.002 percent of revenues and 0.04 percent of profits, on average, for affected very small entities. The annualized costs did not exceed 0.3 percent of revenues or 3.3 percent of profits for very small entities in any affected industry.

The total non-annualized compliance costs for very small entities during the four-year transition period are estimated to be $789 million, or about $197 million per year for four years. Thus, the potential temporary impact on very small entities would be about 0.005 percent of revenues or 0.1 percent of profits, on average, per year for four years.

In order to more carefully focus on the industry sectors most likely to have significant economic impacts, OSHA carefully examined those industries in the chemical manufacturing and petroleum and coal products manufacturing sectors (''chemical and petroleum producers'') that produce chemicals and SDSs. OSHA examined the extent to which these firms might have significant economic impacts if they produced an unusually high number of chemical products requiring SDSs.

To examine this issue, OSHA examined all small chemical and petroleum producers with respect to their costs as a percentage of revenues and profits. Using the same cost estimation methods as the base analysis, OSHA estimated how many separate chemical products a small firm would have to produce for its annualized costs of compliance with the final rule to exceed 5 percent of profits. OSHA found that the firm would have to produce 7,065 distinct chemical products, each requiring its own SDS. OSHA thinks it very unlikely that there are substantial numbers of small firms (with an average of 27 employees) that produce 7,065 or more distinct chemical products. Swedish data show that less than 0.1 percent of all firms (including large firms) in Sweden produce more than 500 distinct chemical products. (Swedish Chemical Agency, *http://www.kemi.se/templates/Page____2859.aspx*)

OSHA conducted a similar analysis for very small firms with fewer than twenty employees. This analysis found that such firms, with an average of 4.7 employees, would need to produce more than 310 distinct chemical products for costs to exceed 5 percent of profits. OSHA estimates that this would be a very rare situation.

Further, even if small firms could be found that produce more than 7,065 chemical products and very small firms that produce more than 310 chemical products, the costs would probably be much lower than OSHA estimates. First, firms producing this many distinct products probably would not produce SDSs and labels without the assistance of specialized computer software, which OSHA assumes most small firms do not use, but would instead invest in appropriate software to lower their costs, as most larger firms do. Second, firms producing large numbers of chemical products commonly do so because they sell a variety of different mixtures with similar ingredients. Once appropriate data for the ingredients of these mixtures had been developed, using the bridging principles outlined in Appendix A of this preamble, small firms developing SDSs and labels for each mixture would take far less than the 7 hours per chemical product that OSHA has estimated for small firms to convert to the GHS system.

OSHA therefore concludes that there are not a substantial number of small entities or very small entities that would have significant economic impacts from this rule as a result of producing a very large number of distinct chemical products.

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Table VI-13.

Potential Economic Impacts on Very Small Entitites

NAICS Code	Industry	Number of Small Firms	Number of Affected Small Firms	Total Annualized Costs	Revenues ($1,000)	Profits ($1,000)	Costs as a Percent of Revenues	Costs as a Percent of Profits
11	**Agriculture, Forestry, Fishing & Hunting**							
113	Forestry & Logging	9,762	9,762	$137,170	$7,083,785	$264,987	0.0019%	0.0518%
114	Fishing, Hunting and Trappinig	2,314	793	$11,990	$1,098,226	$55,867	0.0011%	0.0215%
115	Support Activities for Ag & Forestry	9,445	3,575	$42,788	$5,086,384	$237,153	0.0008%	0.0180%
211	**Oil and Gas Extraction**							
211111	Crude petroleum & natural gas extraction	5,799	5,799	$1,430,992	$12,488,688	$1,764,644	0.0115%	0.0811%
211112	Natural gas liquid extraction	77	77	$21,789	$209,640	$49,370	0.0104%	0.0441%
212	Mining (except Oil & Gas)	3,177	3,177	$69,027	$3,325,567	$381,077	0.0021%	0.0181%
213	Support Activities for Mining	7,928	7,928	$116,194	$6,182,889	$708,497	0.0019%	0.0164%
22	**Utilities**							
2211	Electric Power Gen, Trans & Distrib	687	687	$32,858	$8,364,773	$371,360	0.0004%	0.0088%
2212	Natural Gas Distribution	365	365	$19,030	$6,872,831	$204,745	0.0003%	0.0093%
2213	Water, Sewage, & Other Systems	3,787	3,787	$199,004	$2,032,054	$143,466	0.0098%	0.1387%
23	**Construction**							
236	Construction of Buildings	228,345	228,345	$4,098,063	$237,972,529	$11,581,277	0.0017%	0.0354%
237	Heavy Construction	40,670	40,670	$644,179	$46,766,241	$2,505,688	0.0014%	0.0257%
238	Special Trade Contractors	464,293	464,293	$8,027,825	$255,501,704	$10,430,522	0.0031%	0.0770%
31	**Manufacturing**							
311	Food Manufacturing	15,740	15,740	$909,705	$16,386,415	$617,518	0.0056%	0.1473%
312	Beverage &Tobacco Prod. Manuf.	2,767	2,767	$153,137	$3,071,858	$159,342	0.0050%	0.0961%
313	Textile Mills	1,820	1,820	$106,674	$1,883,037	$40,619	0.0057%	0.2626%
314	Textile Product Mills	5,361	5,361	$309,471	$3,003,179	$44,399	0.0103%	0.6970%
315	Apparel Manufacturing	8,183	8,183	$497,930	$5,242,059	$143,647	0.0095%	0.3466%
316	Leather & Allied Product Manufac.	1,074	1,074	$61,980	$630,150	$21,952	0.0098%	0.2823%
321	Wood Product Manufacturing	10,295	10,295	$620,859	$9,156,974	$622,642	0.0068%	0.0997%
322	Paper Manufacturing	1,525	1,525	$93,164	$2,621,087	$54,869	0.0036%	0.1698%
323	Printing and Related Support	26,437	26,437	$1,518,803	$15,154,719	$623,595	0.0100%	0.2436%
324	**Petroleum & Coal Prod. Manufac.**							
324110	Petroleum refineries	169	169	$75,267	$846,646	$70,857	0.0089%	0.1062%
324121	Asphalt paving mixture & block mfg	257	257	$113,535	$1,022,715	$84,309	0.0111%	0.1347%

Table VI-13.
Potential Economic Impacts on Very Small Entitites (continued)

NAICS Code	Industry	Number of Small Firms	Number of Affected Small Firms	Total Annualized Costs	Revenues ($1,000)	Profits ($1,000)	Costs as a Percent of Revenues	Costs as a Percent of Profits
324	**Petroleum & Coal Prod. Manufac.**							
324122	Asphalt shingle & coating materials mfg	64	64	$27,615	$191,591	$15,794	0.0144%	0.1748%
324191	Petroleum lubricating oil & grease m	176	176	$1,298,965	$478,715	$39,464	0.2713%	3.2916%
324199	All other petroleum & coal products mfg	38	38	$16,524	$90,947	$7,497	0.0182%	0.2204%
325	**Chemical Manufacturing**							
325110	Petrochemical mfg	19	19	$10,440	$122,412	$3,532	0.0085%	0.2956%
325120	Industrial gas mfg	60	60	$11,941	$113,624	$3,278	0.0105%	0.3643%
325131	Inorganic dye & pigment mfg	34	34	$7,228	$93,365	$2,694	0.0077%	0.2683%
325132	Synthetic organic dye & pigment mfg	51	51	$21,741	$80,292	$2,317	0.0271%	0.9385%
325181	Alkalies & chlorine mfg	15	0	$20,310	$48,418	$1,397	0.0419%	1.4539%
325182	Carbon black mfg	5	0	$5,763	$304,654	$8,790	0.0019%	0.0656%
325188	All other basic inorganic chemical mfg	168	168	$56,768	$408,393	$11,783	0.0139%	0.4818%
325191	Gum & wood chemical mfg	26	26	$26,086	$31,054	$896	0.0840%	2.9116%
325192	Cyclic crude & intermediate mfg	8	8	$3,193	$24,784	$715	0.0129%	0.4465%
325193	Ethyl alcohol mfg	123	123	$131,980	$1,283,404	$37,028	0.0103%	0.3564%
325199	All other basic organic chemical mfg	252	252	$101,014	$751,442	$21,680	0.0134%	0.4659%
325211	Plastics material & resin mfg	250	250	$64,501	$1,134,498	$46,939	0.0057%	0.1374%
325212	Synthetic rubber mfg	63	63	$9,107	$88,772	$3,673	0.0103%	0.2480%
325221	Cellulosic organic fiber mfg	8	8	$42,726	$185,094	$7,658	0.0231%	0.5579%
325222	Noncellulosic organic fiber mfg	36	36	$2,115	$57,718	$2,388	0.0037%	0.0886%
325311	Nitrogenous fertilizer mfg	94	94	$26,340	$338,169	$21,263	0.0078%	0.1239%
325312	Phosphatic fertilizer mfg	13	0	$1,722	$23,073	$1,451	0.0075%	0.1187%
325314	Fertilizer (mixing only) mfg	228	228	$58,951	$600,252	$37,743	0.0098%	0.1562%
325320	Pesticide & other agricultural chemical mfg	112	112	$51,087	$212,073	$13,335	0.0241%	0.3831%
325411	Medicinal & botanical mfg	210	210	$68,977	$356,186	$33,025	0.0194%	0.2089%
325412	Pharmaceutical preparation mfg	426	426	$136,912	$765,196	$70,947	0.0179%	0.1930%
325413	In-vitro diagnostic substance mfg	100	100	$45,644	$240,604	$22,308	0.0190%	0.2046%
325414	Biological product (except diagnostic) mfg	117	117	$27,538	$386,255	$35,813	0.0071%	0.0769%
325510	Paint & coating mfg	752	752	$568,789	$1,149,045	$40,737	0.0495%	1.3963%

Table VI-13.

Potential Economic Impacts on Very Small Entitites (continued)

NAICS Code	Industry	Number of Small Firms	Number of Affected Small Firms	Total Annualized Costs	Revenues ($1,000)	Profits ($1,000)	Costs as a Percent of Revenues	Costs as a Percent of Profits
325	**Chemical Manufacturing**							
325520	Adhesive mfg	260	260	$222,690	$565,487	$20,048	0.0394%	1.1108%
325611	Soap & other detergent mfg	493	493	$228,815	$2,370,087	$141,952	0.0097%	0.1612%
325612	Polish & other sanitation good mfg	372	372	$214,047	$396,210	$23,730	0.0540%	0.9020%
325613	Surface active agent mfg	75	75	$89,671	$227,968	$13,654	0.0393%	0.6567%
325620	Toilet preparation mfg	483	483	$306,787	$1,462,510	$87,595	0.0210%	0.3502%
325910	Printing ink mfg	160	160	$134,078	$237,906	$6,584	0.0564%	2.0364%
325920	Explosives mfg	17	17	$8,000	$27,807	$770	0.0288%	1.0396%
325991	Custom compounding of purchased resin	282	282	$41,174	$499,179	$13,815	0.0082%	0.2980%
325992	Photographic film, paper, plate, & chemical mfg	294	294	$119,425	$158,550	$4,388	0.0753%	2.7216%
325998	All other miscellaneous chemical product & preparation	725	725	$532,022	$1,346,709	$37,271	0.0395%	1.4274%
326	Plastics and Rubber Products Man.	6,146	6,146	$668,538	$7,396,665	$315,439	0.0090%	0.2119%
327	Nonmetallic Mineral Prod. Manufac.	7,988	7,988	$807,303	$8,597,728	$404,513	0.0094%	0.1996%
331	Primary Metal Manufacturing	2,397	2,397	$250,174	$5,830,566	$223,141	0.0043%	0.1121%
332	Fabricated Metal Prod. Manufac.	40,717	40,717	$2,413,283	$34,946,520	$1,706,322	0.0069%	0.1414%
333	Machinery Manufacturing	16,005	16,005	$939,380	$17,880,653	$731,804	0.0053%	0.1284%
334	Computer & Electronic Prod Man.	8,186	8,186	$463,555	$10,129,942	$568,805	0.0046%	0.0815%
335	Electric Equipment, Appliance Man.	3,326	3,326	$193,816	$3,979,298	$154,912	0.0049%	0.1251%
336	Transportation Equip. Manufacturing	6,686	6,686	$394,098	$8,047,938	$250,433	0.0049%	0.1574%
337	Furniture & Related Product Man.	17,105	17,105	$997,120	$9,753,841	$443,130	0.0102%	0.2250%
339	Miscellaneous Manufacturing	24,716	24,716	$2,544,473	$15,193,773	$1,241,339	0.0167%	0.2050%
42	**Wholesale Trade**							
423	Durable Goods	153,036	153,036	$1,405,401	$359,014,292	$11,373,749	0.0004%	0.0124%
424	Nondurable Goods	87,149	87,149	$889,501	$274,482,049	$7,892,163	0.0003%	0.0113%
42469	Other Chemicals & AlliedProducts	5,236	5,236	$55,192	$15,422,225	$479,626	0.0004%	0.0115%
4247	Petroleum & petroleum Products	3,447	3,447	$54,765	$45,454,555	$907,656	0.0001%	0.0060%
42495	Paint, Varnish, & Supplies	1,026	1,026	$11,692	$1,715,167	$53,335	0.0007%	0.0219%
44-45	**Retail Trade**							
441	Motor vehicle & parts dealers	76,594	76,594	$1,267,884	$125,419,149	$1,813,597	0.0010%	0.0699%
442	Furniture & home furnishings stores	44,370	42,150	$237,981	$35,302,841	$1,183,904	0.0007%	0.0201%

Table VI-13.
Potential Economic Impacts on Very Small Entitites (continued)

NAICS Code	Industry	Number of Small Firms	Number of Affected Small Firms	Total Annualized Costs	Revenues ($1,000)	Profits ($1,000)	Costs as a Percent of Revenues	Costs as a Percent of Profits
44-45	**Retail Trade**							
443	Electronics & appliance stores	29,916	10,386	$63,206	$21,198,389	$688,789	0.0003%	0.0092%
444	Building material & garden equipment & supplies	54,496	54,496	$356,277	$60,504,808	$3,866,819	0.0006%	0.0092%
445	Food & beverage stores	106,248	56,627	$383,032	$77,467,151	$1,608,634	0.0005%	0.0238%
446	Health & personal care stores	41,531	41,531	$816,673	$51,251,763	$1,388,853	0.0016%	0.0588%
447	Gasoline stations	62,530	33,521	$311,271	$136,136,010	$1,272,163	0.0002%	0.0245%
448	Clothing & clothing accessories stores	65,263	4,423	$31,634	$36,167,162	$1,779,208	0.0001%	0.0018%
451	Sporting goods, hobby, book, & music stores	39,460	8,319	$65,700	$19,884,637	$596,267	0.0003%	0.0110%
452	General merchandise stores	9,892	2,451	$153,225	$4,549,796	$193,643	0.0034%	0.0791%
453	Miscellaneous store retailers	94,696	37,897	$221,542	$47,600,822	$1,580,262	0.0005%	0.0140%
454	Nonstore retailers	36,473	28,430	$181,943	$37,826,412	$1,312,741	0.0005%	0.0139%
48-49	**Transportation & Warehousing**							
481	Air transportation	2,379	1,186	$11,294	$2,787,111	$83,022	0.0004%	0.0136%
483	Water transportation	1,102	1,102	$18,559	$1,658,779	$109,176	0.0011%	0.0170%
484	Truck transportation	96,981	96,981	$1,024,801	$53,129,572	$1,190,275	0.0019%	0.0861%
485	Transit & ground passenger transportation	12,623	4,566	$57,706	$4,110,799	$82,852	0.0014%	0.0696%
486	Pipeline transportation	129	129	$1,859	$453,117	$47,049	0.0004%	0.0040%
487	Scenic & sightseeing transportation	2,432	1,706	$13,771	$972,489	$39,216	0.0014%	0.0351%
488	Support activities for transportation	27,215	27,215	$316,950	$21,566,266	$622,749	0.0015%	0.0509%
492	Couriers & messengers	7,283	7,283	$63,738	$3,210,466	$92,706	0.0020%	0.0688%
493	Warehousing & storage	3,940	3,940	$74,120	$3,746,452	$188,333	0.0020%	0.0394%
51	**Information**							
511	Publishing industries	18,749	12,639	$122,029	$13,237,364	$1,536,839	0.0009%	0.0079%
512	Motion picture & sound recording industries	19,882	2,090	$13,281	$12,870,358	$866,910	0.0001%	0.0015%
515	Broadcasting (except Internet)	4,003	904	$24,190	$2,402,033	$156,213	0.0010%	0.0155%
516	Internet Publishing and Broadcasting	8,215	1,241	$24,532	$8,693,439	$536,578	0.0003%	0.0046%
517	Telecommunications	2,090	140	$11,435	$1,339,867	$99,129	0.0009%	0.0115%
518	Internet Service Providers, Web Search Portals, and Data	9,465	749	$12,071	$6,748,436	$502,452	0.0002%	0.0024%
519	Other Information Services	3,013	260	$11,560	$1,136,006	$101,564	0.0010%	0.0114%

Table VI-13.
Potential Economic Impacts on Very Small Entitites (continued)

NAICS Code	Industry	Number of Small Firms	Number of Affected Small Firms	Total Annualized Costs	Revenues ($1,000)	Profits ($1,000)	Costs as a Percent of Revenues	Costs as a Percent of Profits
52	**Finance & Insurance**							
521	Monetary authorities - central bank	39	6	$20	$63,481	$0	0.0000%	0.0000%
522	Credit intermediation & related activities	58,302	1,041	$0	$36,741,780	$2,866,497	0.0000%	0.0000%
523	Securities intermediation & related activities	54,840	728	$5,102	$51,977,778	$4,624,511	0.0000%	0.0001%
524	Insurance carriers & related activities	134,100	8,701	$133,466	$58,624,336	$2,727,353	0.0002%	0.0049%
525	Funds, trusts, & other financial vehicles (part)	1,978	141	$2,197	$4,149,107	$1,669,915	0.0001%	0.0001%
53	**Real Estate & Rental and Leasing**							
531	Real estate	262,422	206,955	$0	$137,996,566	$16,534,927	0.0000%	0.0000%
532	Rental & leasing services	25,843	25,843	$236,889	$15,896,665	$808,404	0.0015%	0.0293%
533	Lessors of intangible assets, except copyrighted works	2,057	377	$3,143	$3,197,850	$596,803	0.0001%	0.0005%
54	**Professional, Technical & Technical**							
5411	Legal services	174,289	2,513	$12,279	$86,321,366	$3,818,405	0.0000%	0.0003%
5412	Accounting, tax return prep, bookkeeping, & payroll	102,379	7,108	$69,157	$31,004,051	$1,426,974	0.0002%	0.0048%
5413	Architectural, engineering, & related services	90,882	15,816	$148,349	$49,779,421	$2,658,956	0.0003%	0.0056%
5414	Specialized design services	33,538	9,844	$94,996	$16,869,744	$1,080,586	0.0006%	0.0088%
5415	Computer systems design & related services	96,915	2,208	$20,296	$47,470,852	$2,264,474	0.0000%	0.0009%
5416	Management, scientific, & technical consulting services	136,770	19,483	$161,366	$62,747,767	$5,320,724	0.0003%	0.0030%
5417	Scientific R&D Serv.	11,083	2,936	$32,012	$8,652,898	$655,982	0.0004%	0.0049%
5418	Advertising & related services	33,960	10,014	$89,819	$25,585,465	$1,564,672	0.0004%	0.0057%
5419	Other professional, scientific, & technical services	59,820	59,820	$1,172,569	$28,685,212	$2,222,800	0.0041%	0.0528%
55	**Management of Companies**							
551111	Offices of bank holding companies	302	73	$1,115	$401,910	$46,789	0.0003%	0.0024%
551112	Offices of other holding companies	4,071	1,031	$12,205	$8,669,791	$4,714,950	0.0001%	0.0003%
551114	Corporate, subsidiary, & regional managing offices	1,415	524	$5,840	$897,050	$106,581	0.0007%	0.0055%
56	Adm and Support & Waste Managmt	0	0	0	0	0	0.0000%	0.0000%
561	Administrative and Support Serv.	273,987	273,987	$3,634,708	$104,303,502	$4,378,375	0.0035%	0.0830%
562	Wastemanagement & Remediation Serv.	14,617	14,617	$245,885	$10,742,530	$465,981	0.0023%	0.0528%

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Table VI-13.
Potential Economic Impacts on Very Small Entitites (continued)

NAICS Code	Industry	Number of Small Firms	Number of Affected Small Firms	Total Annualized Costs	Revenues ($1,000)	Profits ($1,000)	Costs as a Percent of Revenues	Costs as a Percent of Profits
61	**Educational Services**							
6111	Elementary & secondary schools	8,138	5,363	$62,351	$3,918,185	$270,574	0.0016%	0.0230%
6112	Junior colleges	176	54	$724	$124,349	$8,587	0.0006%	0.0084%
6113	Colleges, universities, & profesional schools	868	503	$6,832	$604,290	$41,730	0.0011%	0.0164%
6114	Business schools, & computer & management training	6,405	257	$1,747	$3,173,380	$219,140	0.0001%	0.0008%
6115	Technical & trade schools	5,744	1,466	$11,805	$2,641,692	$182,424	0.0004%	0.0065%
6116	Other schools & instruction	33,022	2,466	$19,157	$7,652,439	$528,446	0.0003%	0.0036%
6117	Educational support services	5,542	441	$4,626	$2,292,614	$158,318	0.0002%	0.0029%
62	**Healthcare and Social Assistance**							
621	Ambulatory health care services	433,397	433,397	$8,823,627	$259,677,755	$9,455,515	0.0034%	0.0933%
622	Hospitals	504	504	$13,219	$587,182	$21,065	0.0023%	0.0628%
623	Nursing & residential care facilities	18,280	18,280	$401,057	$6,068,649	$217,711	0.0066%	0.1842%
624	Social assistance	89,268	64,212	$831,622	$25,670,497	$920,922	0.0032%	0.0903%
71	**Arts, Entertainment & Recreation**							
711	Performing arts, spectator sports, & related industries	40,669	11,900	$92,728	$24,982,338	$1,625,229	0.0004%	0.0057%
712	Museums, historical sites, & similar institutions	5,747	2,793	$20,149	$2,170,237	$111,949	0.0009%	0.0180%
713	**Amusement, gambling, & recreation industries**							
72	Accommodation & Food Services	382526	67413.91073	864432.113	122534789	4355186.6	0.0037%	0.0979%
721	Accommodation	42,530	42,530	$707,086	$20,102,488	$756,368	0.0035%	0.0935%
722	Foodservices & drinking places	339,996	24,884	$157,346	$102,432,301	$3,598,819	0.0002%	0.0044%
81	**Other Services**							
811	Repair & maintenance	200,415	200,415	$4,075,592	$83,539,569	$2,994,138	0.0049%	0.1361%
811121	Automotive body, paint, & interior repair &	32,865	32,865	$350,734	$17,431,293	$550,217	0.0020%	0.0637%
812	Personal & laundry services	166,031	123,170	$1,758,251	$37,427,321	$1,820,112	0.0047%	0.0966%
812320	Drycleaning & laundry services (except coin-operated)	21,723	19,022	$288,538	$5,077,872	$250,119	0.0057%	0.1154%
812921	Photofinishing laboratories (except one-hour)	911	786	$20,103	$366,845	$18,070	0.0055%	0.1113%
813	Religious/grantmaking/civic/professional & similar org	268,457	97,196	$859,850	$127,185,009	$2,599,099	0.0007%	0.0331%
99	**State and Local Government**							
9992	State Government	n.a						
9993	Local Government	n.a						
	Total	5,797,845	3,605,268	$67,485,667	$3,924,513,515	$173,571,057		
	Total for firms producing SDSs	54,122	54,089	$10,650,638	$68,381,146	$4,995,173		
	Total for firms not producing SDSs	5,743,723	3,551,179	$56,835,029	$3,856,132,369	$168,575,884		

Note: Costs are expressed in 2010 dollars
Source: Office of Regulatory Analysis, OSHA based on ERG (2012)

2. A Statement of the Need for, and Objectives of, the Rule

OSHA's HCS was first adopted in 1983 for manufacturing (48 FR 53280, Nov. 25, 1983). Later the Agency expanded the scope of coverage to include all industries where employees are potentially exposed to hazardous chemicals (52 FR 31852, Aug. 24, 1987).

The HCS requires chemical manufacturers and importers to evaluate the hazards of the chemicals they produce or import. The current rule provides definitions of health and physical hazards to use as the criteria for determining hazards in the evaluation process. Information about chemical hazards and appropriate protective measures is then required to be conveyed to downstream employers and employees by putting labels on containers and preparing and distributing safety data sheets. All employers with hazardous chemicals in their workplaces are required to have a hazard communication program, including container labels, safety data sheets, and employee training.

Ensuring that this information is available in workplaces helps employers design and implement appropriate controls for chemical exposures, provides employees the knowledge of the hazards and identities of the chemicals, and gives employees the opportunity to participate actively in the successful control of exposures. Together employers and employees can use this information to reduce the potential for adverse effects to occur. The information transmitted under the HCS requirements provides the foundation upon which a workplace chemical safety and health program is built. Without this information, appropriate controls could not be identified and implemented.

OSHA's HCS is designed to disseminate information on chemicals, which will precipitate changes in handling methods and thus protect those potentially exposed to the chemical from experiencing adverse effects. To protect employees and members of the public who are potentially exposed to chemicals during their production, transportation, use, and disposal, a number of countries have developed laws that require information about those chemicals to be prepared and transmitted to affected parties. These laws vary with regard to the scope of chemicals covered, definitions of hazards, the specificity of requirements (*e.g.,* specification of a format for safety data sheets), and the use of symbols and pictograms. The inconsistencies between the various laws are substantial enough that different labels and safety data sheets must often be used for the same product when it is marketed in different nations. For example, Canada has established requirements for labels under its Workplace Hazardous Materials Information System (WHMIS). WHMIS requires that labels include specified symbols within a defined circle. U.S. chemical manufacturers must label their chemicals accordingly for marketing in Canada.

Development of multiple sets of labels and safety data sheets for each product shipped to different countries is a major compliance burden for chemical manufacturers, distributors, and transporters involved in international trade. Small businesses may have particular difficulty in coping with the complexities and costs involved, and it has been argued that these differing requirements may be a technical (non-tariff) barrier to trade.

These concerns led, in June 1992, to a mandate from the United Nations Conference on Environment and Development (UNCED)(Chapter 19 of Agenda 21), supported by the U.S., calling for development of a globally harmonized chemical classification and labeling system. The negotiations were extensive and spanned a number of years. The product resulting from this effort, the Globally Harmonized System of Classification and Labeling of Chemicals, was formally adopted by the new United Nations Committee of Experts on the Transport of Dangerous Goods and the Globally Harmonized System of Classification and Labelling of Chemicals in December 2002.

The final rule incorporates the GHS's requirements into the HCS. They require chemical manufacturers to apply new hazard classification criteria to their chemicals and to prepare and distribute new labels and safety data sheets. Further, these SDSs and labels will be standardized in a way that they are not under the existing HCS. OSHA's current performance-based approach to SDSs and labeling can create confusion among those who seek to use hazard information effectively. For example, labels and safety data sheets may include symbols and hazard statements that are unfamiliar to readers or not well understood. This lack of standardization and the absence of pictograms are particularly a problem for U.S. workers not literate in English. Containers may be labeled with such a large volume of information that important statements are not easily recognized.

OSHA believes that adoption of these new requirements will benefit employers and enhance employee safety. Employers who use chemicals and employees exposed to those chemicals will benefit from receiving the revised labels and safety data sheets prepared in a consistent format. OSHA believes that the information will be easier to comprehend and access in the new approach, allowing it to be used more effectively for the protection of employees. The primary effect in workplaces where chemicals are used but not produced will be to integrate the new approach into the workplace hazard communication program, including ensuring that both employers and employees understand the pictograms and other information provided on the chemicals' labels and SDSs.

OSHA believes that adoption of the GHS will improve labels and SDS comprehensibility through implementation of a uniform approach. The current regulatory system includes a performance-oriented approach to labels and SDSs, allowing the producers to use whatever language or format they choose to provide the necessary information. This result in a lack of consistency makes it difficult for users of chemicals to properly identify their hazards and recommended protective measures, particularly when purchasing the same product from multiple suppliers. Having the information provided in the same words and pictograms on labels, as well as having a standardized order of information on SDSs, will help all users, including employers, employees, and emergency responders, to more easily identify the critical information necessary to protect employees.

In addition, OSHA believes that American employees and employers will receive benefits from the international adoption of GHS. Development of the GHS system required extensive work by a great number of people and resources from many countries and organizations. The reason it received such support is the belief that there are significant benefits associated with implementation of a globally harmonized approach to hazard communication. Countries, international organizations, chemical producers, users of chemicals, and employees working with chemicals would all benefit. There are at least four reasons to expect that GHS will be adopted globally.

First and foremost, the GHS modifications of the HCS will enhance protection of workers and the environment. Occupationally related injuries, illnesses, and fatalities remain a serious problem in the U.S. For example, although likely to contain very

significant underreporting, data from the Bureau of Labor Statistics indicate that, in 2007, employees suffered an estimated 55,400 illnesses attributable to chemical exposures (BLS, 2008), and that some 17,340 chemical-source injuries and illnesses involved days away from work (BLS, 2009). As shown in this FEA, the adoption of the revisions to OSHA's HCS is expected to result in a significant reduction in injuries, illnesses, and fatalities among U.S. employees exposed to hazardous chemicals. In addition, while some countries, such as ours, already have the benefits of protection under existing systems, many do not have such comprehensive approaches. Thus, implementation of the GHS would provide these countries with the important protections that result from dissemination of information about chemical hazards and protective measures. The U.S. expects to improve and build on worker protections it already has.

Second, OSHA believes that the final rule will facilitate international trade in chemicals. It will reduce the burdens caused by having to comply with differing requirements for the same product and facilitate small business participation in international trade.

Third, one of the initial reasons this system was pursued internationally involved concerns about animal welfare and the proliferation of requirements for animal testing and evaluation. Existing systems with different definitions of hazards often result in duplicative testing to produce data related to the varying cut-offs in the different systems. Having one agreed definition will reduce the need for this duplicative testing. It should be noted, however, that OSHA's HCS has never had testing requirements. The HCS is based on collecting and evaluating the best available existing evidence on the hazards of each chemical.

Fourth, information transmittal systems provide the underlying infrastructure for the sound management of chemicals in a country. Those countries that do not have the resources to develop and maintain such a system can use the GHS to build their chemical safety and health programs. Since it has been developed, and will be maintained, through an international approach, national resources used to achieve chemical safety and health can be streamlined. Unlike some other issues, a country's approach to the sound management of chemicals definitely affects others countries. In some cases, bordering countries may experience their neighbors' pollution and other effects of uncontrolled chemical exposures. In all countries, there is a need to acquire sufficient information to properly handle chemicals when they are imported from other countries. Thus having a coordinated and harmonized approach to the development and dissemination of information about chemicals would be mutually beneficial to importing and exporting countries.

In the U.S., there are four primary regulatory agencies that exercise jurisdiction over chemical hazard communication: OSHA; the Department of Transportation, which regulates chemicals in transport; the Consumer Product Safety Commission, which regulates consumer products; and the Environmental Protection Agency, which regulates pesticides and has other labeling authority under the Toxic Substances Control Act. These agencies are not domestically harmonized in terms of definitions of hazards and other requirements. If all four agencies adopt the GHS, the U.S. will have the additional benefit of harmonizing the overall U.S. approach to classification and labeling. Since most chemicals are produced in a workplace and shipped elsewhere, many employers deal with at least two sets of federal requirements. Thus these employers would be likely to obtain some benefits from domestic harmonization.

OSHA has made a determination that the revisions to the HCS will improve the quality and consistency of information provided to employers and employees regarding chemical hazards and associated protective measures. The Agency anticipates this improved information will enhance the effectiveness of the HCS in ensuring that employees are apprised of the chemical hazards to which they are exposed, and in reducing the incidence of chemical-related occupational illnesses and injuries. OSHA estimates that (1) savings in benefits from improved employee health and safety exceed the costs of the final rule, and (2) cost savings to chemical users exceed the costs of the final rule.

An additional and more complete discussion of the reasons why this standard is being promulgated by the Agency is provided in other sections of this preamble.

The primary objective of aligning the HCS with the GHS is to achieve the benefits of the OSHA HCS in a more comprehensive, efficient, and effective manner. The revisions are expected to provide an increased degree of occupational safety and health for employees potentially exposed to hazardous chemicals in the workplace and to provide updated, clear, and comprehensive standards regarding the classification of chemical hazards and the manner in which relevant information about chemical hazards is disseminated to affected employees.

The intent of the HCS is to ensure that all chemical hazards are properly evaluated and that information concerning chemical hazards and associated protective measures is transmitted to employers and employees. The standard achieves this goal by requiring chemical manufacturers and importers to review available scientific evidence concerning the physical and health effects of the chemicals they produce or import to determine if they are hazardous.

For every chemical found to be hazardous, the chemical manufacturer or importer must develop a container label and an SDS and provide both to downstream users of the chemical. All employers with employees exposed to hazardous chemicals must develop a hazard communication program and ensure that exposed employees are provided with labels, access to SDSs, and training on the hazardous chemicals in their workplace.

The three information components in this system—labels, SDSs, and employee training—are all essential to the effective functioning of the program. Labels provide a brief, conspicuous summary of hazard information at the site where the chemical is used. SDSs provide detailed technical information and serve as a reference source for exposed employees, industrial hygienists, safety professionals, emergency responders, health care professionals, and other interested parties. Training is designed to ensure that employees understand the chemical hazards in their workplace and are aware of recommended protective measures. Labels, SDSs, and training are complementary parts of a comprehensive hazard communication program—each element reinforces the knowledge necessary for effective protection of employees.

Information provided in accordance with the HCS serves to reduce the incidence of chemical-related illnesses and injuries in the workplace. This is accomplished by modifying the behavior of both employers and employees. For example, the information contained in the HCS enables employers to implement protective measures in the workplace. Employers will also have information to choose less hazardous alternatives or select appropriate engineering controls, work practices, and personal protective equipment. Improved understanding of chemical hazards by supervisory

personnel results in safer handling of hazardous substances, as well as proper storage and housekeeping measures.

Employees provided with information and training on chemical hazards are able to fully participate in the protective measures instituted in their workplaces. Knowledgeable employees can take the steps required to work safely with chemicals in their workplace and are able to determine what actions are necessary if an emergency occurs. Information on chronic effects of exposure to hazardous chemicals helps employees recognize signs and symptoms of chronic disease and seek early treatment. Information provided under the HCS also enables health and safety professionals to provide better services to exposed employees. Medical surveillance, exposure monitoring, and other services are enhanced by the ready availability of health and safety information.

OSHA believes that the comprehensive approach adopted in the HCS, which includes requiring evaluation of chemicals and the transmittal of information through labels, SDSs, and training, is sound. This final rule does not alter that approach. Rather, the final rule is intended to improve the effectiveness of the HCS by enhancing the quality and consistency of the information provided to employers and employees. OSHA believes this can be accomplished by revising the requirements of the standard to conform to the more specific and detailed provisions of the GHS for classification, labeling, and SDSs.

3. The response of the agency to any comments filed by the chief counsel for advocacy of the small business administration in response to the proposed rule, and a detailed statement of any change made to the proposed rule in the final rule as a result of the comments.

The Office of Advocacy in the SBA did not submit any comments to OSHA in response to the proposed rule.

4. A statement of the significant issues raised by the public comments in response to the initial regulatory flexibility analysis, a statement of the assessment of the agency of such issues, and a statement of any changes made in the proposed rule as a result of such comments.

OSHA received numerous comments in the record about the impact of this rulemaking on small entities. There were concerns about OSHA's preliminary cost estimates and concerns that this rule would have a substantial impact on small manufacturers. OSHA carefully evaluated these concerns and has addressed them below as well as in Section VI.F: Costs of Compliance in this preamble.

Some stakeholders felt that OSHA should convene a Small Business Regulatory Enforcement Fairness Act (SBREFA) panel for this rulemaking (Document ID #0361, 0372, 0397, 0407, and 0411). OSHA evaluated this rule under the provisions of the Regulatory Flexibility Act, which requires that OSHA hold a SBREFA (or SBAR—Small Business Advocacy Review) panel when a rule is expected to have a significant impact on a substantial number of small entities. The modifications to the hazard communication standard do affect a substantial number of small entities, but the costs per firm do not rise to the level where they would impose a significant economic impact on a substantial number of small entities. OSHA defines a significant economic impact on small entities as costs that exceed one percent of revenues or five percent of profits for small entities in any affected industry. The Regulatory Flexibility Act does not define the term ''significant economic impact.'' Instead, as noted in the RFA's legislative history, Congress suggested that agencies refer to SBA guidelines for measuring the impact of rules on small businesses. *See* 126 Cong. Rec. S10,942 (Aug. 6, 1980). In relevant guidance, the SBA's Office of Advocacy states that the impact of a regulation ''could be significant if the cost of the proposed regulation (a) eliminates more than 10 percent of the businesses' profits; (b) exceeds 1 percent of the gross revenues of the entities in a particular sector or (c) exceeds 5 percent of the labor costs of the entities in the sector.'' *See* ''A Guide for Government Agencies: How to Comply with the Regulatory Flexibility Act'' (*http://archive.sba.gov/advo/laws/rfaguide.pdf*). Notably, OSHA's threshold of 5 percent of profits is significantly more protective of small businesses than the Office of Advocacy's suggested threshold of 10 percent.

OSHA's two thresholds have long been a part of the Agency's published SBREFA procedures (*See http://www.dol.gov/dol/regs/appendix.htm,* prepared pursuant to Section 212 of the SBREFA) and were originally developed in close cooperation with the Office of Advocacy (*See* SBA Office of Advocacy, 2003, p. 18).

Furthermore, in employing a dual threshold, based on either revenue or profit impacts, OSHA has taken special pains to identify potentially significant impacts on small entities.[31]

While this rule will be costly in the aggregate, it is not aggregate costs but the significance of impacts on small entities that triggers the need for a SBREFA panel. No panel was or is needed for this rulemaking because costs per small entity do not meet the threshold that OSHA uses to define a significant economic impact on a substantial number of small entities.

Stakeholders also expressed concerns that costs were underestimated and that costs to small entities would be considerable. The U.S. Chamber of Commerce asserted that ''the imposition of a completely new system of classification of chemicals represents huge burdens on small employers with significant costs'' (Document ID #0397). OSHA acknowledges that there will be transitional costs for small businesses but feels that the additional transition time OSHA has incorporated into the final rule and discussed in more detail elsewhere in the FEA, combined with OSHA compliance assistance and the fact that many firms have already made the transition to GHS, should allow small employers to adopt the GHS criteria without overwhelming challenges. The U.S. Chamber of Commerce did not provide additional details, which were solicited as part of both the ANPR and the NPRM, on what types of costs small businesses would incur or the possible magnitude of those costs. Without detailed estimates, OSHA cannot fully evaluate alternative costs for small businesses; nor can OSHA adopt alternative cost estimates without persuasive evidence in the record.

Wacker Chemical Company felt that the changes to the HCS would have a large impact on small businesses ''result[ing] from the lack of personnel and financial resources to implement changes of this magnitude which may involve reclassification of the companies' products, reauthoring SDSs

[31] By comparison, many other agencies, such as EPA and the Department of Homeland Security, rely only on revenue impacts. See also *Aeronautical Repair Station Ass'n, Inc.* v. *F.A.A.,* 494 F.3d 161, 175 (D.C. Cir. 2007). (Federal Aviation Administration made determination that proposed regulation would not have significant economic impact on substantial number of small entities based on its calculation of annualized costs of less than 1 percent of annual median revenue); *Washington* v. *Daley,* 173 F.3d 1158, 1171 (9th Cir. 1999) (parties agreed that economic impact of Department of Commerce regulation would be considered significant if regulation resulted in more than 5 percent reduction in annual gross revenues). It should also be noted that, in OSHA's experience, the 5-percent profitability threshold is much more likely than the 1-percent revenue threshold to trigger a significant impact on a substantial number of small entities. This is supported by the fact that, with profit rates in the United States equal to approximately 6 percent of revenues (as it is, on average, for all firms affected by this final rule), for a firm with profits of 6 percent of revenues, 5 percent of profits will be approximately equivalent to 0.3 percent of revenues.

and labels, and training personnel'' (Document ID #0335), and IBM Corporation expressed concern that small businesses ''may not have the technical resources and skill to generate safety data sheets for [* * *] mixtures'' (Document ID #0334). The Agency believes that small firms have the expertise to make the hazard determinations and meet the other transitional requirements of the revised HCS and, other than comments on the possibility of technical expertise being an issue for small firms asserted by a few firms who do not qualify as small, OSHA did not receive solid evidence that a lack of technical expertise among small firms would actually be a significant issue. Chemical manufacturers and users have been able to comply with the current HCS, and manufacturers have been able to make the classification determinations and label their products in the appropriate manner. In addition, some small firms are likely already complying with the requirements of GHS in order to facilitate international trade. The revised HCS will not be considerably more technical or require considerably more expertise in order to comply than the current HCS. There is also no evidence, from the experiences of firms in the EU or in Asian markets where the GHS criteria for classification of chemicals, label elements, and SDS formats have already been adopted into practice, that small firms are not able to comply due to either overwhelming costs or to a lack of technical expertise required to make the changes.

Many comments expressed general concern that OSHA underestimated the compliance burden on small businesses (Document ID #0336, 0372, 0397, and 0407), and OSHA has increased some costs (for instance, doubling the time required for training) in response to these comments. The comments, while appreciated and insightful, did not contain the level of detail that OSHA would need in order to make a case for changing many of the estimates in the PEA. For the most part, comments received on the issue of costs to and impacts on small businesses simply stated that (in general) costs to small businesses were understated in the PEA or asserted that impacts would be significant without providing data to support alternative estimates. In order to assess the impacts on the cost effectiveness of this standard of possible underestimation of cost parameters, the Agency has included a sensitivity analysis in Section VI.L: Sensitivity Analysis in this preamble. Additional concerns about costs that are not specific to small businesses are addressed further in Section VI.F: Costs of Compliance in this preamble.

Many commenters, including some who voiced concerns about costs, did not support a voluntary adoption approach or any other exemption or modified system for small businesses (Document ID #0324, 0327, 0328, 0329, 0335, 0338, 0351, 0352, 0370, 0376, 0377, 0381, 0382, 0393, and 0410). DuPont felt that dual systems would ''undermine the goal of harmonization [* * * and] be very confusing for employees'' (Document ID #0329). Ferro Corporation expressed the view that ''failure to implement [the requirements of the rule] across-the-board will cause confusion; negate main benefits; and potentially be less protective'' (Document ID #0363).

Many of the commenters who addressed small business issues felt that the benefits to small businesses would be negligible (Document ID #0372, 0378, 0385, 0396, 0397, 0400, 0402, and 0407). Commenters who viewed the primary benefits of adopting the GHS as facilitating international trade were likely to favor an alternative of less than full compliance with GHS. As has been addressed throughout the FEA, however, OSHA's estimates of the benefits of this final rule reflect fewer worker injuries and illnesses, efficiency improvements in the safe handling of hazardous chemicals, and less costly and more effective hazard communication training of new workers. While OSHA recognizes the significant potential trade benefits of this final rule, the Agency did not quantify or monetize these benefits.

In response to numerous comments received in the record, OSHA has extended the phase-in period for this rulemaking and aligned the phase-in of this rule to correspond to the EU's deadline for classification of mixtures. Some of these comments asserted that more time would be especially beneficial to small businesses, reducing the compliance burden significantly (Document ID #0399, 0405, and 0408). For example, the National Association of Chemical Distributors suggested a timeline of 3 years plus 18 months for distributors and downstream users (Document ID #0341). The effective dates in the final rule take these (and other suggestions) into account and provide substantial additional time for implementation. Where the proposal required all labels and SDSs to be in compliance with the new requirements in three years after publication (or August 2014), the final rule requires manufacturers and importers to modify labels and SDSs by June 1, 2015. The final rule also gives distributors an additional six months, until December 1, 2015, to sell stock labeled under the current standard. In addition, employers are given another six months, until June 1, 2016, to update their training and their hazard communication program with any new hazard information received because of the final rule. Finally, the proposal required that exposed employees receive initial training two years after adoption (or August 2013), whereas the final rule gives employers until December 1, 2013 to complete this training.

5. Description of and estimate of the number of small entities to which the rule will apply.

OSHA has completed an analysis of the economic impacts associated with this final rule, including an analysis of the type and number of small entities to which the final rule applies. In order to determine the number of small entities potentially affected by this rulemaking, OSHA used the definitions of small entities developed by the Small Business Administration (SBA) for each industry.

The final standard impacts firms that are the primary producers or distributors of hazardous chemicals, and firms whose employees are exposed to hazardous chemicals. Based on the definitions of small entities developed by SBA for each industry, the final rule is estimated to potentially affect a total of 4,093,543 small entities, as shown in Table VI–12. The rule has its greatest impacts on the 72,040 small firms that produce chemicals that require SDSs and labels.

6. Description of the projected reporting, recordkeeping, and other compliance requirements of the rule.

The final standard includes revised criteria for classification of chemical hazards; revised labeling provisions that include requirements for use of standardized signal words, pictograms, and hazard statements; a specified format for safety data sheets; and related revisions to definitions of terms used in the standard, employee information and training requirements, and other sections of HCS. The final rule also modifies other OSHA standards that contain hazard communication requirements to harmonize them with the requirements of GHS. In addition, certain OSHA standards use HCS terms, and OSHA is making changes to ensure that the scope of those standards is not changed by the GHS revisions.

The preamble to the final standard provides a comprehensive description of, and further detail regarding, the compliance requirements of the rulemaking. A description of the types

of entities which would be subject to the new and revised requirements, and the types of professional skills necessary for compliance with the requirements, is presented in the relevant sections of this economic analysis and the corresponding supporting research, and is summarized below with a summary of unit costs. Except for employee training and color printing, these costs would apply only to those small businesses not already in compliance with the revisions.

Reclassifying chemicals and modifying SDSs and labels:

- Medium establishments (100–499 employees): An average of 5 hours per SDS; in addition, for 25 percent of establishments, an average of $208 per SDS for software modifications.
- Small establishments (1–99 employees): An average of 7 hours per SDS. Management familiarization and other costs:
- Eight hours for health and safety managers and logistics personnel in the manufacturing sector;
- Two hours for each hazard communication program manager not in the manufacturing sector.

Employee training:

- One hour per production employee in most industries;
- Thirty minutes in occupations exposed to few hazardous chemicals and types of hazards;
- Ten minutes per employee in some occupations where GHS-type pictograms are already in use.

Color Printing

- Category 1 establishments (those currently printing only in black & white who do not own color printers): Medium establishments $0.01 per label, small establishments $0.13 per label, and very small establishments $0.14 per label.
- Category 2 establishments (those currently printing only in black & white but who own color printers): Medium establishments $0.01 per label, small establishments $0.13 per label, and very small establishments $0.14 per label.
- Category 3 establishments (those currently purchasing pre-printed label stock): Medium establishments $0.03 per label, small and very small establishments $0.03 per label.
- Category 4 establishments (those currently producing labels printed in multiple colors): No additional costs related to this provision.

7. A description of the steps the Agency has taken to minimize the significant economic impact on small entities.

OSHA has extended the phase-in period for this rulemaking in response to stakeholder concern. The Agency believes that the additional time granted to manufacturers, distributors, and users of chemicals will serve to reduce the transitional costs associated with this rule. Chemical manufacturers currently revise SDSs and labels periodically to include new or updated hazard information, and the extended time frame will allow firms to adopt the GHS criteria into their hazard communication program and to modify SDSs, warning labels, and workplace signs within the normal flow of their operations.

OSHA will be offering guidance materials such as quick cards and fact sheets to aid firms in developing and implementing the training requirements of this rule. OSHA will also be releasing a small business compliance guide to provide additional guidance to small businesses, which will ease the economic impact and compliance burden. The Agency solicited comment from stakeholders as part of the ANPR and NPRM on what compliance assistance tools would be most helpful and has incorporated the suggestions received in the record in the development of guidance materials.

J. Environmental Impacts

OSHA has reviewed the provisions of this final rule in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 *et seq.*), the Council on Environmental Quality (CEQ) NEPA regulations (40 CFR Parts 1500–1508), and the Department of Labor's NEPA Procedures (29 CFR Part 11). As a result of this review, OSHA has determined that the final rule will have no significant adverse effect on air, water, or soil quality, plant or animal life, use of land, or other aspects of the environment. OSHA anticipates that the more complete and easier-to-understand SDSs resulting from this rule will, in addition to increasing employee health and safety, have positive effects on the environment.

K. Unfunded Mandates Reform Act Analysis

Section 3 of the Occupational Safety and Health Act makes clear that OSHA cannot enforce compliance with its regulations or standards on the U.S. government ''or any State or political subdivision of a State.'' Under voluntary agreement with OSHA, some States enforce compliance with their State standards on public sector entities, and these agreements specify that these State standards must be equivalent to OSHA standards. Thus, although OSHA may include compliance costs for affected public sector entities in its analysis of the expected impacts associated with the final HCS rule, the rule does not involve any unfunded mandates being imposed on any State or local government entity.

Based on the analysis presented in this economic analysis, OSHA concludes that the final rule would impose a Federal mandate on the private sector in excess of $100 million in expenditures in any one year. Accordingly, this economic analysis of the final rule, concerning revisions to the HCS, constitutes the written statement containing a qualitative and quantitative assessment of the anticipated costs and benefits of the Federal mandate, as required under Section 202(a) of the Unfunded Mandates Reform Act of 1995 (2 U.S.C. 1532(a)).

L. Sensitivity Analysis

In this section, OSHA provides a sensitivity analysis of the major assumptions underlying the Agency's estimates of the annualized costs and annualized benefits of the final rule. The purpose is to determine whether OSHA's conclusion that the final rule yields net benefits is vulnerable to a reasonable change in any one of these assumptions. OSHA's choice of how much to increase unit cost parameters in the sensitivity analysis was intended to reflect an upper bounds (or more) of reasonableness, based on comments, as well as on professional experience and common sense. (As a result, there are almost no estimates provided by commenters of higher unit costs than we used in the sensitivity analysis, and we rejected those few outliers as being unrealistically large and certainly not representative of the average establishment covered by this rule.) OSHA's choice of how much to decrease unit benefit parameters was more subjective and reflected the fact that few commenters provided alternative quantitative estimates. Broadly, the Agency cut unit benefit parameters by at least half in all cases for the sensitivity analysis, which OSHA believes is consistent with the spirit of comments that either supported OSHA's estimates of benefits or thought benefits were somewhat overestimated—the exception being those few commenters who disputed the existence of health and safety benefits or productivity benefits arising from the proposed rule. However, it should be carefully noted that any given benefit category could be reduced to zero and the net benefits would still be positive. This can be seen in Table VI–1, which shows that the estimated net positive annualized benefits of the final rule ($556 million)

significantly exceed the estimated annualized benefits for any individual category of benefits—Reduction in Safety and Health Risks ($250 million); Productivity Improvements for Health and Safety Managers and Logistics Personnel ($475 million); and Savings during Periodic Updating of SDSs and Labels ($32 million).

The sensitivity analysis below shows that OSHA's conclusion that the final rule produces net benefits is not dependent on any particular assumption. In fact, the estimated annualized health and safety benefits of the rule alone, independent of any productivity benefits, exceed the estimated annualized cost of the rule. Further, the broad support from industry for this rule, even from those commenters critical of some of OSHA's estimates of costs and benefits, suggests that industry believes the productivity benefits of the rule exceed the costs.

The methodology and calculations underlying the estimation of the compliance costs, benefits, and economic impacts associated with this rulemaking are generally linear and additive in nature. Thus, the sensitivity of the results and conclusions of the analysis will generally be proportional to variations in the relevant input parameters.

For example, if the estimated time that companies need to reclassify chemical hazards and revise SDSs and labels were doubled, the corresponding labor costs (but not software costs) of reclassification and revision of SDSs and labels would double as well.

OSHA evaluated a series of such changes in input parameters to test whether and to what extent the general conclusions of the economic analysis held up. On the whole, OSHA found that the conclusions of the analysis are reasonably robust, as changes in any of the input parameters tend not to produce disproportionately large changes in the results. The results also show significant net annualized benefits for the rule regardless of the individual revisions to costs, benefits, or discount rate. The results of the individual sensitivity tests are summarized in Table VI–14 and are described in more detail below.

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Table VI-14
Sensitivity Tests

Impact Variable	OSHA's Best Estimate	Sensitivity Test	Impact on Annualized Costs or Benefits	Percentage Impact on Costs or Benefits	Adjusted Annualized Costs or Benefits	Adjusted Annualized Net Benefit
Cost				**Percentage Cost Impact**	**Adjusted Costs**	
OSHA's Best Estimate of Annualized Total Cost and Annualized Net Benefits					*$201 million*	*$556 million*
Time to Reclassify Chemicals; Revise SDSs and Labels	5.1 hours	100% increase	$18 million	9%	$219 million	$538 million
Number of SDSs	1,414,636	100% increase	$23 million	11%	$223 million	$533 million
Number of Employees Requiring Training	43.7 million	50% increase	$48 million	24%	$248 million	$508 million
Training Time Per Employee	0.84 hours	100% increase	$96 million	48%	$297 million	$460 million
Cost of Color Printing	$24 million	100% increase	$24 million	12%	$225 million	$532 million
Benefit				**Percentage Benefit Impact**	**Adjusted Benefits**	
OSHA's Best Estimate of Annualized Total and Net Benefits					*$757 million*	*$556 million*
Reduced Injuries, Illnesses, and Fatalities Relative to HCS Estimate	1%	0.5%	$ -125 million	-17%	$632 million	$431 million
	1%	5%	$1,000 million	132%	$1,757 million	$1,556 million
Savings due to Improved Efficiency in Creating and Revising SDSs	3.2 hours	50% decrease	$-17 million	-2%	$740 million	$539 million
Savings due to Improved Efficiency of S&H Managers and Logistics Personnel	3%, 15%	67% decrease	$-315 million	-42%	$442 million	$241 million
Savings due to Simplified Hazard Communication Training of All Affected New Employees in Future Periods	Unquantified	0.5 hours/worker	$285 million	38%	$1,042 million	$841 million
Discount Rate	7%	3%				$678 million

Source: U. S. Department of Labor, OSHA, Directorate of Evaluation and Analysis, Office of Regulatory Analysis.

In the sensitivity test on costs where OSHA doubled the estimated time that companies need to reclassify chemical hazards and revise SDSs and labels, and estimates of other input parameters remained unchanged, as shown in Table VI–14, the estimated total costs of compliance would increase by $18 million annually, or by about 9 percent, while net benefits would also decline by $18 million, from $556 million to $538 million annually.

In a second sensitivity test, OSHA doubled the estimated total number of affected SDSs addressed by this rulemaking, which increased the estimated total cost of reclassification and revision of SDSs and labels. As shown in Table VI–14, if OSHA's estimates of other input parameters remained unchanged, the total estimated costs of compliance would increase by $23 million annually, or by about 11 percent, while net benefits would also decline by $23 million annually, from $556 million to $533 million annually.[32]

In a third sensitivity test, when OSHA increased by 50 percent the estimated number of employees required to be covered by hazard communication programs and to be trained on GHS, the corresponding estimate of the total costs associated with training employees increased by 50 percent. As shown in Table VI–14, if OSHA's estimates of other input parameters remained unchanged, the total estimated costs of compliance would increase by $48 million annually, or by about 24 percent, while net benefits would also decline by $48 million annually, from $556 million to $508 million annually.

In a fourth sensitivity test, when OSHA doubled the estimated incremental amount of time necessary for training employees on GHS, the corresponding estimate of the total costs associated with training employees also doubled. As shown in Table VI–14, if OSHA's estimates of other input parameters remained unchanged, the total estimated costs of compliance would increase by $96 million annually, or by about 48 percent, while net benefits would also decline by $96 million annually, from $556 million to $460 million annually.

OSHA performed a fifth sensitivity test where the estimated incremental per-label cost of printing labels in color was doubled. As shown in Table VI–14, if OSHA's estimates of other input parameters remained unchanged, the total estimated costs of compliance would increase by $24 million annually, or by about 12 percent, while net benefits would also decline by $24 million annually, from $556 million to $532 million annually

OSHA also performed sensitivity tests on several input parameters used to estimate the benefits of the final rule. In one sensitivity test on benefits, OSHA reduced its estimate of health and safety benefits of the final rule from 1 percent to 0.5 percent of the benefits estimated for the existing HCS. As shown in Table VI–14, if OSHA's estimates of other input parameters remained unchanged, the total estimated benefits of the final rule would decline by $125 million annually, or by about 17 percent, while net benefits would also decline by $125 million annually, from $556 million to $431 million annually.

In a second, parallel sensitivity test on benefits, OSHA increased its estimate of health and safety benefits of the final rule from 1 percent to 5 percent of the benefits estimated for the existing HCS. As shown in Table VI–14, if OSHA's estimates of other input parameters remained unchanged, the total estimated benefits of the final rule would increase by $1,000 million annually, or by about 132 percent, while net benefits would also increase by $1,000 million annually, from $556 million to $1,556 million annually.

In a third sensitivity test on benefits, OSHA reduced its estimate of savings due to the improved efficiency in creating and revising SDSs under GHS by 50 percent. As shown in Table VI–14, if OSHA's estimates of other input parameters remained unchanged, the total estimated benefits of the final rule would decline by $17 million annually, or by about 2 percent, while net benefits would also decrease by $17 million annually, from $556 million to $539 million annually.

In a fourth sensitivity test on benefits, OSHA reduced its estimate of savings due to the improved efficiency of safety and health managers and logistics personnel by 67 percent. As shown in Table VI–14, if OSHA's estimates of other input parameters remained unchanged, the total estimated benefits of the final rule would decline by $315 million annually, or by about 42 percent, while net benefits would also decrease by $315 million annually, from $556 million to $241 million annually.

And finally, in the fifth sensitivity test on benefits, OSHA tested the effect of including cost savings from simplified hazard communication training in future periods made possible by the final rule.[33] For this sensitivity test, OSHA added a cost savings of a half hour, on average, in training time per new employee once the transition period ends and the final rule is fully implemented. OSHA chose a half-hour time savings based on the testimony of the one commenter who provided an estimate of the time savings from simplified hazard communication training.[34] As shown in Table VI–14, as a result of adding the half-hour savings in training time, assuming OSHA's estimates of other parameters remain unchanged, the total benefits of the final rule would increase by $285 million annually,[35] or by about 38 percent, while net benefits would also increase by $285 million annually, from $556 million to $841 million annually.

OSHA also examined the effect of a change in the discount rate on the annualized costs and benefits. Changing the discount rate from 7 percent, used in the base case, to 3 percent would have the effect of lowering the costs to $161 million per year and increasing the gross benefits to $839 million per year. The result, as shown in Table VI–14, would be to increase net benefits by

[32] For this sensitivity analysis, OSHA calculated only the impact on costs of an increase in the number of SDSs. However, in principle, each additional SDS would yield future benefits due to improved efficiencies in creating and revising SDSs under GHS. Although not shown in Table VI–8, this effect would increase benefits by $32 million annually, more than offsetting the $23 million annual cost increase.

[33] As noted in the earlier discussion on benefit, in Section VI.D of this preamble, comments on the proposed rule contained extensive qualitative support for the proposition that the revisions to the HCS rule will make training easier and therefore less time-consuming and less costly.

[34] Printing Industries of America testified at the OSHA public hearing held in Pittsburgh that training for an employee who would be responsible for working with hazardous materials is ''approximately an hour to an hour and a half'' and that training would be less time-consuming under the revised HCS and might be reduced ''possibly by a third simply because [the revised HCS will] be removing a number of types [of MSDS and labeling systems]'' (Document ID #0499, Tr. 96–7). This estimate would be consistent with a saving in training time of one-third to one-half of an hour relative to current training time of one to one and a half hours. OSHA chose the one-half-hour estimate because a representative training time for all the commenters would be at least an hour and a half (and arguably more like 3 hours). Furthermore, in its final economic analysis for the original hazard communication rule, OSHA estimated that the rule would require an average of 3 hours of training per employee (48 FR 53280, Nov. 25, 1983).

[35] This estimate uses the BLS turnover rate to arrive at the number of new employees per year per establishment and assumes from one to ten employees per training session, depending on establishment size. The cost savings due to simplified training take into account one half hour of managerial time to deliver the training plus one half hour of time for each of 17.5 million new employees a year to receive the training. The annualized cost savings of $285 million is equal to annual cost savings of $465.5 million multiplied by an annualization factor of 0.6130 to reflect the fact that these cost savings would not begin to be realized until five years after the effective date of the final rule.

$122 million per year, from $556 million to $678 million per year.

OSHA also considered the sensitivity of its findings that the final rule is economically feasible and does not have a significant economic impact on a substantial number of small entities. For example, even if all of the estimated annualized costs of compliance were to increase by 50 percent, these costs would still represent less than 0.005 percent of annual revenues and less than 0.1 percent of annual profit for the average establishment, small entity, or very small entity, and no small entity or very small entity would have costs in excess of 1 percent of revenues or 5 percent of profits.

In conclusion, the sensitivity analysis demonstrates that even with relatively large variations in the input parameters, there would not be any disproportionately large changes in the estimates of compliance cost or benefits. Further, even if there were a 50 percent increase in all of the compliance cost estimates, there would still be a relatively high confidence in OSHA's finding concerning economic feasibility, the certification that the standard will not have significant economic impacts on a substantial number of small entities, and the conclusion that the benefits of the final rule exceed the costs.

VII. OMB Review Under the Paperwork Reduction Act of 1995

The final rule revises existing Hazard Communication collection of information (paperwork) requirements that are currently approved by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (PRA–95), 44 U.S.C. 3501 *et seq.,* and OMB's regulations at 5 CFR part 1320. On October 30, 2009, the Department of Labor submitted Hazard Communication collection of information requirements identified in the NPRM to OMB for review in accordance with 44 U.S.C. 3507(d). In accordance with 44 U.S.C. 3506(c)(2), the proposed regulation solicited public comments on the revision of the Hazard Communication Standard's (HCS) Information Collection Request (ICR) (paperwork burden hour and cost analysis) for the proposal. OSHA received no public comments on the Hazard Communication Standard's ICR. On November 18, 2009, OMB filed a comment on the Hazard Communication Standard NPRM ICR in accordance with 44 U.S.C. 3507(d). OMB stated, ''This OMB action is not an approval to conduct or sponsor an information collection request under the Paperwork Reduction Act of 1995.'' The final Standard modifies existing information collection requirements that are currently approved under OMB Control Number 1218–0072. This ICR has been revised and submitted to OMB. OSHA will publish a separate notice in the **Federal Register** that will announce the result of OMB's reviews. The Department of Labor notes that a Federal agency cannot conduct or sponsor a collection of information unless OMB approves it under the PRA–95, and the agency displays a currently valid OMB control number. Also, notwithstanding any other provision of law, no employer shall be subject to penalty for failing to comply with a collection of information if the collection of information does not display a currently valid OMB control number.

The final rule standardizes the hazard communication requirements for hazardous chemical products used in U.S. workplaces, and thus provides employees with consistent hazard communication information. Hazard communication is currently addressed by many different international, national, and State authorities. These existing requirements are not always consistent and often contain different definitions of hazards and varying provisions for what information is required on labels and safety data sheets (SDSs). The final standard harmonizes the U.S. system with international norms and as a result would enhance worker safety and facilitate international trade. The final rule's modifications to the Hazard Communication Standard's collection of information requirements include: (1) Revised criteria for classification of chemical hazards; (2) revised labeling provisions that include requirements for use of standardized signal words, pictograms, hazard statements, and precautionary statements; (3) a specified format for SDSs; and (4) related revisions to definitions of terms used in the Standard and to requirements for employee training on labels and SDSs.

Paragraph (d), ''hazard classification,'' requires chemical manufacturers and importers to evaluate chemicals produced in their workplaces or imported by them to classify the chemicals' health and physical hazards in accordance with the Standard. For each chemical, the chemical manufacturer or importer must determine the hazard classes, and the category of each hazard class, that apply to the chemical being classified. Employers are not required to classify chemicals unless they choose not to rely on the classification performed by the chemical manufacturer or importer for the chemical. Chemical manufacturers, importers or employers classifying chemicals must identify and consider the full range of available scientific literature and other evidence concerning the potential hazards. There is no requirement to test the chemical to determine how to classify its hazards. Mandatory Appendix A to § 1910.1200 shall be consulted for classification of health hazards, and Mandatory Appendix B to § 1910.1200 shall be consulted for the classification of physical hazards.

For mixtures, chemical manufacturers, importers, or employers evaluating chemicals also must follow the procedures described in Appendixes A and B to § 1910.1200 to classify the hazards of the chemicals, including determinations regarding when mixtures of the classified chemicals are covered by the Standard. When classifying mixtures they produce or import, chemical manufacturers and importers of mixtures may rely on the information provided on current SDSs of the individual ingredients except where the chemical manufacturer or importer knows, or in the exercise of reasonable diligence should know, that the SDS misstates or omits information required by the provisions in the final HCS.

Pursuant to paragraph (e), employers are required to develop, implement, and maintain at each workplace a written hazard communication program which at least describes how the criteria specified in paragraphs (f), (g), and (h) of the standard on labels and other forms of warning, SDSs, and employee information and training will be met, and which also includes the following: (i) a list of the hazardous chemicals known to be present using a product identifier that is referenced on the appropriate SDS (the list may be compiled for the workplace as a whole or for individual work areas); and (ii) the methods the employer will use to inform employees of the hazards of non-routine tasks (for example, the cleaning of reactor vessels) and the hazards associated with chemicals contained in unlabeled pipes in their work areas. The final rule makes no changes to this requirement.

Paragraph (f) modifies existing label requirements by requiring more specific information. Paragraph (f)(1) requires chemical manufacturers, importers, or distributors to ensure that each shipped container of classified hazardous chemicals leaving the workplace is labeled, tagged, or marked with the following information:

(i) Product identifier;

(ii) Signal word;
(iii) Hazard statement(s);
(iv) Pictogram(s);
(v) Precautionary statement(s); and
(vi) Name, address, and telephone number of the chemical manufacturer,
importer, or other responsible party.

The chemical manufacturer, importer, or distributor must ensure that the information provided under (i) through (v) above must be in accordance with the mandatory Appendix C, *Allocation of Label Elements,* for each hazard class and associated hazard category for the hazardous chemical; prominently displayed; and in English (other languages may also be included if appropriate). In addition, the information in (ii) through (iv) must be located together on the label, tag, or mark.

For labels in the workplace, except as provided in paragraphs (f)(7) and (f)(8) of the Standard, employers must ensure that each container of hazardous chemicals in the workplace is labeled, tagged, or marked with either (i) the information specified under (f)(1)(i) through (v) for labels on shipped containers; or (ii) product identifier and words, pictures, symbols, or combination thereof, which provide at least general information regarding the hazards of the chemicals, and which, in conjunction with the other information immediately available to employees under the hazard communication program, will provide employees with the specific information regarding the physical and health hazards of the hazardous chemical.

OSHA has also updated the language for workplace signs and labels to incorporate the GHS hazard statement and the applicable precautionary statement(s), where required. Most OSHA substance-specific heath standards require hazard warning signs, usually for regulated areas, and the language required on the signs varies. With the GHS revision, these standards retain the requirements for specific warning language for specific signs; however, OSHA has modified the language to be compatible with GHS and consistent throughout the OSHA standards. The GHS classification process for a specific substance dictates the hazard warnings and the precautionary statements that will be required on the new GHS-compliant product labels. OSHA believes that having signs and labels in the same formats and containing identical warnings for the same health effects will make it far easier for employers and employees to quickly recognize the hazard and the degree of danger of a hazard, thus enhancing communication.

The final rule modifies the language requirements for signs and labels found in the Agency's health standards listed below in Table VII–1. Since the final rule provides specific language for signs and for labels on containers of contaminated clothing, waste and debris, the Agency is exempted from taking burden hours and costs for these provisions. (*See* 5 CFR 1320.2(c)(2) (''Controlling paperwork burden on the public'')). The Agency is taking burden hours and costs for employers to label, tag, or mark each container of hazardous chemicals with either (i) the information specified under (f)(1)(i) through (v) for labels on shipped containers; or (ii) the product identifier and words, pictures, symbols, or combination thereof, which provide at least general information regarding the hazards of the chemicals.

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Table VII–1

General Industry	
Standard	**OMB Control Number**
Welding, Cutting, and Brazing 1910.252	1218-0207
Asbestos 1910.1001	1218-0133
13 Carcinogens 1910.1003	1218-0085
Vinyl Chloride 1910.1017	1218-0010
Inorganic Arsenic 1910.1018	1218-0104
Lead 1910.1025	1218-0092
Chromium (VI) 1910.1026	1218-0252
Cadmium 1910.1027	1218-0185
Benzene 1910.1028	1218-0129
Coke Oven Emissions 1910.1029	1218-0128
Cotton Dust 1910.1043	1218-0061
1,2-dibromo-3-chloropropane 1910.1044	1218-0101
Acrylonitrile 1910.1045	1218-0126
Ethylene Oxide 1910.1047	1218-0108
Formaldehyde 1910.1048	1218-0145
Methylenedianiline 1910.1050	1218-0184
1,3-Butadiene 1910.1051	1218-0170
Methylene Chloride 1910.1052	1218-0179
Hazard Communication 1910.1200	1218-0072

Construction Industry	
Standard	**OMB Control Number**
Methylenedianiline 1926.60	1218-0183
Lead 1926.62	1218-0189
Asbestos 1926.1101	1218-0134
Chromium 1926.1126	1218-0252
Cadmiun 1926.1127	1218-0186
Maritime	
Standard	**OMB Control Number**
Asbestos 1915.1001	1218-0195
Chromium (VI) 1915.1026	1218-0252

BILLING CODE 4510–26–C

Pursuant to paragraph (f)(11), chemical manufacturers, importers, distributors, or employers who become newly aware of any significant information regarding the hazards of a chemical shall revise the labels for the chemical within six months of becoming aware of the new information, and shall ensure that labels on containers of hazardous chemicals shipped after that time contain the new information. If the chemical is not currently produced or imported, the chemical manufacturer, importer, distributor, or employer shall add the information to the label before the chemical is shipped or introduced into the workplace again.

Paragraph (g)(2) requires the chemical manufacturer or importer preparing the SDS to ensure that it is in English (although the employer may maintain copies in other languages as well), and include the following section numbers and headings, and associated information under each heading, in the order listed (*See* Appendix D to § 1910.1200—Safety Data Sheets, for the specific content of each section of the safety data sheet).

Section 1, Identification;
Section 2, Hazard(s) identification;
Section 3, Composition/information on ingredients;
Section 4, First-aid measures;
Section 5, Fire-fighting measures;
Section 6, Accidental release measures;
Section 7, Handling and storage;
Section 8, Exposure controls/personal protection;
Section 9, Physical and chemical properties;
Section 10, Stability and reactivity;
Section 11, Toxicological information; and
Section 16, Other information, including date of preparation or last revision.

Although not required by the final rule, an employer may include the following sections to be consistent with the GHS:

Section 12, Ecological information;
Section 13, Disposal considerations;
Section 14, Transport information; and
Section 15, Regulatory information.

Paragraph (g)(5) requires the chemical manufacturer, importer or employer preparing the SDS to ensure that the information provided accurately reflects the scientific evidence used in making the hazard classification. If the chemical manufacturer, importer or employer preparing the SDS becomes newly aware of any significant information regarding the hazards of a chemical, or ways to protect against the hazards, this new information must be added to the SDS within three months. If the chemical is not currently being produced or imported, the chemical manufacturer or importer must add the information to the SDS before the chemical is introduced into the workplace again.

Paragraph (g)(11) requires that employers ensure the SDSs are readily available, upon request, to designated representatives, the Assistant Secretary, and the Director, in accordance with the requirements of 29 CFR 1910.1020(e).

OMB Control Number: 1218–0072.

Affected Public: Business or other for-profit.

Number of Respondents: 5,514,697.

Frequency: On Occasion.

Average Time per Response: The average time per response ranges from twelve seconds for employers to label portable in-plant containers to seven hours for employers to reclassify chemicals and revise SDSs and labels.

Estimated Total Burden Hours: 11.3 million hours.

Estimated Cost: $34.7 million.

VIII. Federalism and Consultation and Coordination With Indian Tribal Governments

The Agency reviewed this final rule according to the most recent Executive Order (''E.O.'') on Federalism (E.O. 13132, 64 FR 43255, August 10, 1999). This E.O. requires that Federal agencies, to the extent possible, refrain from limiting State policy or local

policymaking discretion, consult with States and local officials prior to taking any actions that restrict their policy options, and take such actions only where there is constitutional and statutory authority to do so and the problem is of national significance. The E.O. generally allows Federal agencies to preempt State law only where there is clear evidence of Congressional intent to allow it, or where the exercise of State authority would conflict with the exercise of Federal authority under a statute; in such cases, Federal agencies must limit preemption of State law to the extent possible.

In Section 18 of the Occupational Safety and Health Act (the OSH Act), Congress expressly provides that States may adopt, with Federal OSHA approval, a plan for the development and enforcement of occupational safety and health standards. States that obtain Federal approval for such plans are referred to as ''State Plan States'' (29 U.S.C. 667). Occupational safety and health standards developed by such State Plan States, among other things, must be at least as effective in providing safe and healthful employment and places of employment as Federal OSHA standards.

OSHA intends to closely scrutinize amendments to previously approved State hazard communication standards submitted under current or future State plans to ensure equal or greater effectiveness, including assurance that any additional requirements do not conflict with, or adversely affect, the effectiveness of the national application of OSHA's standard. OSHA must also determine in its review whether any State plan standard provisions that differ from the Federal provisions, when applicable to products distributed or used in interstate commerce, are ''required by compelling local conditions and do not unduly burden interstate commerce.'' OSH Act section 18(c), 29 U.S.C. 667(c).

This final rule complies with E.O. 13132. In States that do not have OSHA-approved State Plans, this rule limits State policy options in the same manner as all OSHA standards.

OSHA also reviewed this final rule in accordance with E.O. 13,175 on Consultation and Coordination with Indian Tribal Governments (65 FR 67,249 (Nov. 9, 2000)), and determined that it does not have ''tribal implications'' as defined in that order. The final rule does not have substantial direct effects on one or more Indian tribes, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes.

IX. State Plans

When federal OSHA promulgates a new standard or more stringent amendment to an existing standard, the 27 States or U.S. territories with their own OSHA-approved occupational safety and health plans must revise their standards to reflect the new standard or amendment, or show OSHA why there is no need for action, e.g., because an existing state standard covering this area is already ''at least as effective'' as the new federal standard or amendment. 29 CFR 1953.5(a). The state standard must be at least as effective as the final federal rule, must be applicable to both the private and public (state and local government employees) sectors, and must be completed within six months of the publication date of the final federal rule. When OSHA promulgates a new standard or a standards amendment which does not impose additional or more stringent requirements than an existing standard, states are not required to revise their standards, although OSHA may encourage them to do so.

The 27 States and U.S. territories with OSHA-approved occupational safety and health plans are: Alaska, Arizona, California, Hawaii, Indiana, Iowa, Kentucky, Maryland, Michigan, Minnesota, Nevada, New Mexico, North Carolina, Oregon, Puerto Rico, South Carolina, Tennessee, Utah, Vermont, Virginia, Washington, and Wyoming. Connecticut, Illinois, New Jersey, New York and the Virgin Islands have OSHA approved State Plans that apply to public-sector employees only.

This final rule modifies OSHA's hazard communication standard to conform to the United Nations' Globally Harmonized System of Classification and Labelling of Chemicals (GHS). It requires chemical manufacturers to use revised criteria for classification of chemical hazards, revised labeling provisions, and a specified format for safety data sheets. There are also revised requirements for employers to train their employees regarding labels and safety data sheets for hazardous chemicals. This GHS rule will also increase worker protection by improving the quality and consistency of information provided to employers and employees regarding chemical hazards and protective measures. Therefore, State Plan States must adopt comparable provisions within six months of publication of the final rule. Each State's existing requirements will continue to be in effect until it adopts the required revisions.

X. Unfunded Mandates

OSHA reviewed this final rule according to the Unfunded Mandates Reform Act of 1995 (''UMRA''; 2 U.S.C. 1501 *et seq.*) and Executive Order (''E.O.'') 12875 (58 FR 58093, Oct. 28, 1993).

Under Section 202 of the UMRA, an agency must prepare a written ''qualitative and quantitative assessment'' of the anticipated costs and benefits of any Federal regulation creating a mandate that ''may result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of $100,000,000 or more'' in any one year. 2 U.S.C. 1532(a). As discussed in section VI of this preamble (''Final Economic and Voluntary Regulatory Flexibility Analysis''), the Agency estimates that this final rule will require private sector employers annualized expenditures of $201 million per year. However, OSHA's final rule does not place a mandate on State or local governments, for purposes of the UMRA, because OSHA cannot enforce its regulations or standards on State or local governments. (*See* 29 U.S.C. 652(5).) Under voluntary agreement with OSHA, some States enforce compliance with their State standards on public sector entities, and these agreements specify that these State standards must be equivalent to OSHA standards. The OSH Act also does not cover tribal governments in the performance of traditional governmental functions, though it does when tribal governments engage in commercial activity. However, this final rule does not require tribal governments to expend, in the aggregate, $100,000,000 or more in any one year for their commercial activities. Thus, although OSHA may include compliance costs for affected governmental entities in its analysis, this rulemaking did not trigger the requirements of UMRA based on its impact on State, local, or tribal governments.

Based on the analysis presented in the Final Economic Analysis (section VI above), OSHA has determined that this final rule will impose a Federal mandate on the private sector in excess of $100 million in expenditures in any one year, and is thus subject to the requirements under UMRA for review of private sector costs. The Final Economic Analysis in section VI, satisfies these requirements, and provides a written statement containing the qualitative and quantitative assessment of costs and benefits as is required under Section 202(a) of UMRA (2 U.S.C. 1532).

XI. Protecting Children From Environmental Health and Safety Risks

E.O.13045 requires that Federal agencies submitting covered regulatory actions to OMB's Office of Information and Regulatory Affairs (OIRA) for review pursuant to E.O.12866 must provide OIRA with (1) an evaluation of the environmental health or safety effects that the planned regulation may have on children, and (2) an explanation of why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the agency. E.O.13045 defines ''covered regulatory actions'' as rules that may (1) be economically significant under E.O.12866 (*i.e.,* a rulemaking that has an annual effect on the economy of $100 million or more, or would adversely effect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities), and (2) concern an environmental health risk or safety risk that an agency has reason to believe may disproportionately affect children. In this context, the term ''environmental health risks and safety risks'' means risks to health or safety that are attributable to products or substances that children are likely to come in contact with or ingest (*e.g.,* through air, food, water, soil, product use). This final rule is economically significant under E.O.12866 (*See* section VI of this preamble). However, after reviewing this final rule, OSHA has determined that the standard would not impose environmental health or safety risks to children as set forth in E.O.13045.

XII. Environmental Impacts

The Agency reviewed this final rule according to the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 *et seq.*), the regulations of the Council on Environmental Quality (40 CFR part 1500), and the Department of Labor's NEPA procedures (29 CFR part 11).

As a result of this review, OSHA has determined that this final rule will have no impact on air, water, or soil quality; plant or animal life; or the use of land or aspects of the external environment. Therefore, OSHA concludes that this final rule will have no significant environmental impacts.

XIII. Summary and Explanation of the Final Rule

This final rule is based on the public record developed during the rulemaking. As described in Section II, an advance notice of proposed rulemaking (ANPR) was published by OSHA on September 12, 2006 (71 FR 53617). The ANPR included a series of questions to solicit information on a number of specific topics. The responses from more than 100 commenters were used by the Agency to help prepare the required analyses for the proposed rulemaking, as well as to make determinations regarding the proposed text. The notice of proposed rulemaking (NPRM) was published by OSHA on September 29, 2009 (74 FR 50280). Public comments were received during a 90-day comment period that ended on December 29, 2009. Subsequently, public hearings were convened in March 2010 in Washington, DC, and Pittsburgh, PA, for the Agency to receive oral testimony from interested parties. Following completion of the hearings, participants were given an opportunity to provide additional information to OSHA during a post-hearing comment period, as well as submit briefs summarizing their views for the record. The public record upon which OSHA is basing the final standard includes all of the comments, testimony, and supporting information submitted by rulemaking participants, as well as by OSHA.

Support for the rulemaking. Many of those who responded to the ANPR expressed their support for adoption and implementation of the GHS. The supporters far outnumbered those who opposed or questioned adoption (*See, e.g.,* Document ID #0003, 0007, 0011, 0033, 0038, 0047, 0050, 0052, 0062, 0106, 0123, 0130, 0151, 0163, and 0171). The reasons presented for this support varied, but included the belief that adoption of the GHS will bring consistency and clarity to hazard communication (*e.g.,* Document ID #0038, 0046, 0059, and 0081); will help to ensure that employees have reliable, consistent, comprehensive, and comprehensible information (*e.g.,* Document ID #0030, 0037, and 0124); will help to enhance human health and the environment (improved worker safety) (*e.g.,* Document ID #0032, 0064, 0081, and 0128); and will reduce burdens associated with preparing multiple classifications and labels for the same product (*e.g.,* Document ID #0030, 0048, 0080, and 0123).

Support for implementation of the GHS by OSHA was expressed by both users and producers of chemicals who responded to the ANPR (*See, e.g.,* Document ID #0038, 0054, 0064, and 0124). While support for implementation of the GHS was widespread in the ANPR comments, these supporters also recognized the challenges associated with implementation. For example, it was noted by a number of commenters that there will be short-term costs associated with implementation, and they urged OSHA to take steps to minimize them by providing a reasonable time period for phase-in, coordinating with other agencies, and providing extensive outreach (*See, e.g.,* Document ID #0032, 0111, 0155, 0157, and 0162). Others were concerned that the GHS is not completely harmonized because it allows countries, and agencies within countries, to select from among a collection of building blocks when determining the scope of their requirements (*e.g.,* Document ID #0076).

In addition to those who supported implementation, but raised areas of concern regarding the way in which it is pursued, there were others who did not support implementation (Document ID #0004, 0065, 0068, and 0108). These commenters argued that it would be too burdensome (Document ID #0004); delegates power to an international body, which can only be accomplished through a treaty, if at all (Document ID #0065); would change the current hazard communication scheme and thus potentially impair safety (Document ID #0065); and should not be applied to pesticides because they are already heavily regulated (Document ID #0108).

In the NPRM, OSHA addressed each of these concerns and concluded that evidence, arguments, and accompanying analyses supported pursuing the modifications to the HCS. OSHA preliminarily determined that these modifications would enhance employee protection and facilitate compliance for all workplaces that produce or use hazardous chemicals.

While OSHA did not include questions regarding the support of stakeholders for adoption of the GHS, it was clear that a majority of those responding to the ANPR supported moving forward with the rulemaking. The arguments presented by those few who actively objected to adoption were addressed in the NPRM and the analyses for the rule, and were not found by OSHA to be persuasive. Other issues raised by supporters as concerns, or suggestions for addressing concerns, were also addressed in the proposed rule.

OSHA indicated in the NPRM (74 FR 50281, Sept. 30, 2009) that the Agency had made a ''preliminary determination that the proposed modifications to the HCS would increase the quality and consistency of information provided to employers and employees.'' OSHA also indicated that the ''standardized label elements would be more effective in communicating hazard information;

standardized headings and a consistent order of information would improve the utility of SDSs; and training would support and enhance the effectiveness of the new label and SDS requirements.'' Participants were asked if they agreed with this assessment, and also to provide information that reflected on the effectiveness of the proposed modifications in protecting employees from chemical hazards in the workplace.

Many participants responded, and the vast majority agreed with OSHA's preliminary determination that the proposed modifications would be effective in protecting employees, as well as the conclusions as to the reasons why it would be effective, and thus supported the rulemaking (*See, e.g.,* Document ID #0336, 0338, 0339, 0376, 0377, 0382, 0402, 0403, 0404, and 0412). These commenters reflected on a number of different aspects regarding effectiveness when indicating their support. For example, in comments provided on behalf of the American Iron and Steel Institute (AISI) and the American Coke and Coal Chemicals Institute (ACCCI), it was stated (Document ID #0360):

> AISI and ACCCI support OSHA's assessment that modifications to the Hazard Communication Standard (HCS) would increase the quality and consistency of information provided to employers and employees. Two improvements are expected with the changes OSHA has proposed:
>
> a. Standardized criteria to evaluate chemicals and communicate the hazards via Safety Data Sheets (SDSs) and labeling should assure consistent communication and lower the likelihood of miscommunication and misinterpretation.
>
> b. Standardized criteria to evaluate chemicals should facilitate training. With a single teaching format for SDSs and Labels, understanding, regardless of an employee's educational background, should be improved.

Comments of the Society of Chemical Manufacturers and Affiliates (SOCMA) express support, while highlighting some of the potential implementation challenges that will have to be addressed (Document ID #0402). SOCMA's comments are illustrative of those provided by other commenters who qualified their support by expressing issues that would have to be addressed in order for the benefits to occur *(See also, e.g.,* Document ID #0369):

> SOCMA members are generally very supportive of the implementation of GHS for workplace hazard communication in the United States, and for over the past forty years, we have spent millions of dollars and dedicated an insurmountable amount of time towards evaluating potential chemical hazards, communicating hazard information and protecting workers. The proposed rule may have a disproportionate economic impact on small business chemical manufacturers, particularly companies that are already struggling in these unstable economic times. A majority of these burdens can be mitigated, though, if the most affected entities are given adequate time to transition and proper compliance assistance is provided.
>
> * * * Once overcome though, the potential benefits of implementing GHS in the United States are highly anticipated by SOCMA members, some of which include: The harmonization of incompatibilities and inconsistencies in labeling and classification, more uniformity in both substance and format, the elimination of language and reading barriers through pictograms, and the facilitation of control banding.

OSHA addresses the suggestions of SOCMA and other commenters on ways to mitigate implementation issues in discussions of specific provisions below. The Agency believes it has taken the legitimate concerns of stakeholders into consideration when determining the final provisions of this rule.

The National Institute for Occupational Safety and Health (NIOSH) has extensive experience in another international effort to harmonize information on chemicals—development of International Chemical Safety Cards under the auspices of the World Health Organization (WHO) and the International Program on Chemical Safety (IPCS). In their comments, they highlighted the advantages of internationally-harmonized classification criteria (Document ID #0412):

> NIOSH recognizes OSHA's Hazard Communication Standard (HCS) as one of the most important U.S. regulations in occupational safety and health and concurs with OSHA on the need for a revised HCS. A significant advantage of the proposed standard is the detailed criteria for classification will improve accuracy and consistency in the information provided to employers and employees on chemical hazards and protective measures. Those criteria will reduce the likelihood of differing interpretations of the same data. In addition, the specified hazard categories will convey the severity of the effect, unlike the hazard classes in the current HCS.

Worker representatives also supported the proposed rulemaking. For example, comments on behalf of the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union (AFL/CIO.CLC), stated (Document ID #0403.2):

> The committees which designed the GHS agreed on an important principle early in the work: The final harmonized system should not weaken the protection afforded by any existing system. That in itself was a significant accomplishment. However, in the United States, adopting the GHS will go a step further—the revised, GHS-compliant Hazard Communication rule will greatly improve the comprehensibility of labels and safety data sheets, giving workers and employers—especially employers in small business—information they can more easily understand and use.

While stakeholder support for the rule was extensive, there were some stakeholders who did not support pursuing a final rule to modify the HCS, sought to exempt their constituents from its provisions, or supported a different approach. For example, the American Composite Manufacturers Association (ACMA) argued that the protections of the current rule are sufficient, and implementation of the revisions would be too burdensome for their industry (Document ID #0407). No data were provided to support these contentions. The North American Insulation Manufacturers Association (NAIMA) indicated they support harmonization, but argued that the proposed standard will not achieve global harmonization for a number of reasons, including conflicting domestic requirements (*See* discussion below), administrative hurdles to regularly revising the GHS to remain current with the international version, and obstacles to keeping the GHS current (Document ID #0411). And the National Propane Gas Association (NPGA) stated that only those who operate in an international market will benefit, and that does not include the propane industry (Document ID #0400). Similarly, the Intercontinental Chemical Corporation (ICC) argued that companies not involved in international trade should be allowed to continue complying with the existing standard, and that those who are involved can comply with the revised provisions (Document ID #0502).

OSHA does not find any of these arguments persuasive. With regard to NAIMA, OSHA indicated in the NPRM how it plans to maintain the necessary consistency with the GHS through the various rulemaking options available to the Agency, and that it continues to participate in the international GHS activities in order to be involved in maintenance of the system itself. We do not agree that these are insurmountable concerns that argue against adopting the provisions, or changing the approach in a significant way.

OSHA agrees with ACMA and ICC that the existing standard provides extensive protections to exposed employees. However, the analyses presented in support of the proposed and final rules demonstrate that these

protections could be improved by adopting the revised provisions. See Sections IV and VI of this document. In addition, the argument of NPGA that benefits only accrue to companies involved in international trade is not accurate. The improved protections of the rule due to standardization of classification criteria and harmonization of communication on labels and safety data sheets apply equally to employees of companies involved in international trade, and to those in companies that are not involved in such trade. Workers who use hazardous chemicals produced for the domestic market are entitled to the same level of protection as those who use chemicals produced for the international market, and any standard that treated them differently might well be inconsistent with the OSH Act. As indicated in the regulatory analyses for the proposed and final rules, the revisions are economically and technologically feasible for all businesses, including small businesses. See Section VI of this document.

Other general issues. Commenters also raised a number of other issues related to the rulemaking that were not directed to specific paragraphs of the HCS in responses to both the ANPR and the NPRM. Some respondents indicated that OSHA should limit changes to the HCS to those required to align with the GHS, thus keeping the framework of the existing HCS (*See, e.g.,* Document ID #0047, 0080, 0104, 0123, 0145, 0163, 0167, and 0170). For example, ORC Worldwide (Document ID #0123) stated in ANPR comments:

> * * * OSHA can help minimize the cost to businesses by only modifying those sections of the OSHA Hazard Communication Standard (HCS) that must be changed to be consistent with GHS. Therefore, we strongly support OSHA's stated intent to maintain the current scope, application, and interpretations of the HCS, and only modify those sections of the standard necessary for consistency with the GHS. Not only will this help minimize the implementation burden on industry, it should also serve to minimize confusion among employers and employees during the implementation period.

OSHA agreed with these commenters, and made every effort in the NPRM to maintain the framework of the current HCS in the proposed revisions. The modifications proposed were believed by OSHA to be those that were required to align the current HCS with the GHS, but did not address provisions of the current standard that are not addressed in the GHS. Thus, for example, the scope and application paragraph remained largely unchanged, as did the paragraph addressing trade secret protection. The primary modifications proposed in those paragraphs were changes in terminology required to ensure consistency.

A number of commenters addressed this issue in their NPRM comments and testimony as well. For example, Dow Chemical Corporation indicated (Document ID #0353) that OSHA should follow two overarching principles as it revises the HCS. The first is to ''implement the GHS with as little US customization as possible,'' and the second is to ''make only those changes to the HCS that are necessary to facilitate GHS implementation.'' (*See also, e.g.,* Document ID #0370.) Both of these principles were, in fact, followed by OSHA when preparing the NPRM.

Others commenters recognized this was OSHA's approach, and supported it. For example, the Defoamer Industry Trade Association (DITA) noted (Document ID #0367):

> DITA applauds the fact that OSHA did not modify the GHS definitions to a great degree. These definitions reflect a consensus scientific process for the review of the hazards that chemicals can present and the toxicology data that predicts the likelihood of hazard occurring. Accordingly, this should lead to a high level of harmonization on the classification of chemical substances between the EU and the US. A high degree of harmonization is desirable so that manufacturers do not need different SDSs that satisfy the requirements of different countries.

In the final rule, OSHA has continued to remain as consistent as possible with the provisions of the GHS. In general, OSHA has not changed the language of GHS provisions unless necessary to conform with the regulatory requirements of the HCS. Country-specific deviations are very limited, and are intended to ensure that the protections of the current rule are maintained in the final rule. This is consistent with the principle of the GHS developers that no country should have to reduce protections in order to harmonize. OSHA does not believe that any of the deviations in the final rule conflict in a substantive way with the GHS itself.

Many commenters to the ANPR also suggested that OSHA should coordinate implementation of the GHS with other Federal agencies. These included primarily EPA, DOT, and CPSC (*See, e.g.,* Document ID #0048, 0050, 0053, 0076, 0104, 0111, 0123, 0134, 0154, 0162, and 0170). For example, the Soap and Detergent Association (Document ID #0170) stated:

> SDA urges OSHA to coordinate implementation of revisions to the HCS related to the GHS with the Environmental Protection Agency (EPA), Department of Transportation (DOT), and the Consumer Product Safety Commission (CPSC), which all have announced their intentions to implement GHS provisions in their regulations. Workplace hazard communication occurs in a stage of the overall life cycle of chemicals and finished products. Coordination and synchronization of implementation timing could greatly improve the efficiency of implementation of the GHS by industry.

Others mentioned coordinating implementation with the Mine Safety and Health Administration (MSHA) (Document ID #0049, 0101, and 0111).

Similar comments were received in responses to the NPRM (*See, e.g.,* Document ID #0344, 0345, 0350, 0351, 0375, 0376, 0403, and 0411). OSHA agrees with these commenters that the U.S. government agencies should continue to coordinate their activities with regard to implementation of the GHS. In terms of adopting the GHS provisions, DOT has substantially aligned the criteria for physical hazards in their regulations with those of the GHS under the HM–215I rulemaking (71 FR 78596, Dec. 29, 2006). DOT and OSHA arguably have the greatest interface in covered chemical products, and thus adoption of this final rule will result in greater consistency between these two agencies. EPA and CPSC have not initiated rulemaking on the GHS. However, as will be discussed later in this preamble, EPA and OSHA have worked together to develop a common position on coverage of pesticides and chemicals covered by the hazard communication requirements of the Toxic Substances Control Act's (TSCA's) significant new use rules. Clearly, there is no way to coordinate timelines for adoption given that OSHA is at the final rule stage, and neither EPA nor CPSC has started a rulemaking process. As rulemaking develops in these Agencies, discussions will continue to take place in the interagency committee on this subject. With regard to MSHA, Department of Labor rulemaking activities are coordinated through Department officials, and MSHA has been apprised of OSHA's activities in order to determine what action may be appropriate for them to pursue in this area.

A number of commenters to the ANPR also argued that OSHA should coordinate implementation with major U.S. trading partners (*See, e.g.,* Document ID #0042, 0048, 0101, 0116, 0128, 0141, 0155, and 0170). Similarly, several argued that countries should limit modifications to the GHS that are country-specific, and that the UN process should be used to control such changes (Document ID #0018, 0042,

0134, 0154, 0163, 0164, and 0171). For example, the American Petroleum Institute (API) addressed these issues as follows (Document ID #0171):

API strongly recommends that OSHA ensure that timing and coordination of GHS implementation schedules are in line with those of other countries, allowing sufficient time for companies to organize and accomplish necessary work. In order to achieve international harmonization of hazard communication materials and to avoid undue burden on companies, OSHA must stay engaged with all other actors to encourage even and consistent implementation of GHS by individual countries. Further, API recommends that OSHA work closely with other government agencies and countries to ensure alignment to the UN endorsed version of the GHS. As the implementation of the GHS by countries deviates from the UN version of GHS, the perceived benefits of harmonization substantially decrease.

Similar comments were received by participants in the rulemaking after the NPRM was published. For example, 3M indicated (Document ID #0405):

3M agrees that the potential benefits identified in the proposed NPRM may be achieved through global implementation of GHS. However, 3M emphasizes that the potential benefits of GHS will depend on countries around the world aligning as closely as possible with the GHS. The potential benefits of GHS will be substantially undercut by country-specific differences or additions that would require companies to have multiple SDSs and labels for the same product.

Michele Sullivan, an independent consultant, recognized OSHA's approach as being appropriate, and argued for coordination among trading partners (Document ID #0382):

Consistent implementation among the major trading partners of the world is crucial to realize the benefits of the GHS system. For this reason, the alignment, insofar as possible, of all national and regional GHS systems with the UN GHS system is critical. In addition, any national or regional GHS implementation effort must retain enough flexibility to continually adapt the system as necessary to harmonize as closely as possible with the UN GHS system.

OSHA agrees with these commenters that coordination among trading partners would enhance harmonization and facilitate implementation. The Agency remains active in the UN process, participating in the Sub-committee of Experts on the GHS (UNSCEGHS), as well as the United Nations Institute for Training and Research (UNITAR) Programme Advisory Group. There is increased emphasis in the Sub-committee on implementation issues as well as coordination. OSHA is leading a correspondence group of interested members established by the Sub-committee that is reviewing practical classification and hazard communication issues, and proposing modifications to the Sub-committee to clarify such provisions when identified. There are also other correspondence groups that are addressing implementation issues as they are raised to the Sub-committee. OSHA tries to participate in all of this work in the Sub-committee to help ensure that any U.S.-identified issues are raised and addressed. Essentially all of the countries involved in implementation participate in the Sub-committee, so this is OSHA's best opportunity to coordinate with them.

The Agency has also had bilateral discussions with Canada, as well as the European Union (EU), on issues related to implementation. These discussions continue periodically to address mutual issues of concern.

Canada has not yet proposed modifications to their system to achieve harmonization, but they are planning to in the near future. The EU has adopted the GHS, and according to a press release on January 4, 2011, from the European Chemicals Agency (ECHA), recently reached a significant implementation milestone for its Classification, Labelling and Packaging (CLP) regulation. (*http://echa.europa.eu/news/pr/201101/pr_11_01_clp_deadline_20110104_en.asp*):

By 3 January 2011, ECHA received 3,114,835 notifications of 24,529 substances for the Classification and Labelling Inventory. By this deadline, industry had to notify the classification and labelling of all chemical substances that are hazardous or subject to registration under the REACH regulation and placed on the EU market.
* * *

The Classification, Labelling and Packaging regulation relates to chemical substances and mixtures. It introduces into the EU the criteria of the United Nations' Globally Harmonised System for classifying and labelling chemicals. One of the aims of the CLP regulation is to improve the protection of human health and the environment by providing criteria for defining when a substance or mixture displays properties that lead to its classification as hazardous.

CLP applies to manufacturers, importers, users or distributors of chemical substances or mixtures. They must classify, label and package any substance or mixture, regardless of its annual tonnage, in accordance with the Regulation.

The largest number of the notifications, over 800,000, came from Germany. Over 500,000 notifications were submitted from the United Kingdom and nearly 300,000 from France. All together over 6,600 companies notified at least one substance.

Canada and the EU are two of the major trading partners for the U.S. When OSHA prepared the NPRM, it examined the CLP to coordinate where possible on approaches to implementation. However, the primary principles followed by OSHA in developing this proposal were to ensure that the modifications maintain or enhance the protections of the current standard, and that the modifications are consistent with the negotiated provisions of the GHS.

One of the issues of concern regarding implementation by some other countries has been deviation from the GHS itself. Because GHS is intended to be globally implemented, efforts by countries to deviate in a collective manner from the GHS, rather than maintaining consistency, defeats the purpose and, consequently, lessens the benefits of the GHS. OSHA will continue to seek opportunities to ensure coordination of implementation and promote harmonization, both internationally and bilaterally.

It should also be noted that the GHS is a living document, and the UN actively reviews it and considers possible changes based on implementation experiences and other information. These changes are made on a two-year cycle, referred to as a biennium. The OSHA proposal and the final rule are based on Revision 3 of the GHS. Revision 3 was adopted by the UN Committee and Sub-Committee of Experts on the GHS in December 2008, and is available as a publication and on the UN Web site. In December 2010, the UN Committee and Sub-committee of Experts on the GHS adopted additional changes that will be issued as Revision 4.

It is expected that as the UNSCEGHS fulfills its mandate to ensure that the GHS is up-to-date and relevant, further changes will be adopted on a biennium basis. If the change(s) is substantive and controversial, OSHA will have to engage in notice-and-comment rulemaking in order to amend the HCS. However, for non-substantive or clarification changes, other rulemaking options are available that can be utilized to implement the changes more quickly than the full notice-and-comment rulemaking process.

Two possible means are the Standards' Improvement Process (SIPs) or a Direct Final Rule (DFR). Each of these options gives the public notice and opportunity to comment, but has the advantage of a faster process. Either method could be used to ensure that the HCS remains current with the GHS.

A number of NPRM participants commented that OSHA should establish a stakeholder process for input into U.S. government positions on issues raised at

the UN (*See, e.g.,* Document ID #0376, 0377, 0381, 0382, and 0411). OSHA is always open to receiving suggestions from stakeholders regarding issues raised in the UN process. The working papers are made publicly available on the UN Web site some 12 weeks before meetings. Public meetings are scheduled to receive input in some situations, and stakeholders may also contact the primary OSHA delegate directly to discuss any of the issues raised. Stakeholders can participate in the Sub-committee discussions directly as well through organizations that have recognized status in the Sub-committee. As already noted, changes to the OSHA HCS as a result of modifications to the GHS in the future will be subject to a public rulemaking process where all stakeholders have the opportunity to participate.

In the NPRM (74 FR 50288, Sept. 30, 2009), OSHA noted that one advantage of adopting a system with harmonized hazard statements is that it would facilitate the use of ''control banding'' in the U.S. Control banding is an approach to selecting control measures for workplace chemical exposures. Basically, the employer can, with the use of information readily available in the workplace, use the approach to determine the appropriate control measures for a chemical. The harmonized hazard statements are key to assessing the hazards, and the degree of severity of the hazards. In combination with data about physical and chemical characteristics, quantities used, and the types of processing, the employer can access recommended control measures. It is particularly helpful in situations with common operations (*e.g.,* bagging operations), and chemicals with well-known hazards that are not severe (*e.g.,* it would not generally be applied to a carcinogen—the control banding guidance would inform the employer that professional assistance must be acquired to address such a hazard). Control banding has been used successfully by small and medium-sized businesses that don't have extensive health and safety expertise in these types of situations.

There is considerable international interest in this approach, and there have been a number of research studies conducted to refine the approach and determine its applicability. Both OSHA and NIOSH have taken part in activities to further investigate its utility in the U.S. NIOSH has extensive information available on its Web site at *http://www.cdc.gov/niosh/topics/ctrlbanding/*. As they indicated in their comments (Document ID #0412):

> The use of control banding to provide guidance for chemical safety and health approaches in U.S. workplaces cannot be accomplished until harmonized hazard statements are readily available. Adoption of the GHS and its phrases would open up the possibility that control banding guidance can be used in the United States to help small- and medium-sized employers select and implement appropriate control measures [NIOSH 2009].

The American Society of Safety Engineers (Document ID #0336) is also a strong proponent of control banding. However, their position was that OSHA should have included control banding in the NPRM, and thus in the HCS:

> * * * ASSE believes OSHA should update the HCS to incorporate elements of control banding. Assuming that most elements of GHS will be adopted and a national database for safety data sheets (SDSs) and chemical classifications will be established to support the transition to GHS from current practice, building a system that would allow guided review of materials and processes such as control banding would be a relatively small additional step. We encourage OSHA to take that step now and avoid revisiting this issue when it becomes unavoidable as control banding grows in use internationally as well among leading employers in this nation.

While OSHA agrees with ASSE that control banding may be a very useful approach to controlling workplace exposures to chemicals, it does not agree that this rulemaking is the appropriate place to address this issue. As noted by both OSHA and NIOSH, adoption of the GHS will facilitate the use of control banding in the U.S. by making harmonized hazard statements readily available on labels and SDSs. This will allow the adaptation of the approach in a way that could not be readily accomplished with the current performance orientation of the HCS. However, it is generally viewed as a guidance approach where it is currently used, and not a mandatory requirement. Furthermore, control banding continues to be refined in terms of application, and is not harmonized. Adoption of it in the HCS would also not be consistent with the principles OSHA has followed in devising the NPRM, *i.e.,* to limit changes to those required to align with the GHS, and to be as consistent as possible with the GHS provisions. Therefore, while OSHA believes the utility of control banding should continue to be assessed and evaluated in the U.S., it is premature to consider the approach as a mandatory requirement and part of the revised HCS.

Outreach/compliance assistance. The ANPR included a series of questions to solicit input from the public on what outreach or compliance assistance materials would be appropriate and useful. OSHA received many comments in response to these questions, with a number of creative and interesting suggestions for outreach products. The Agency will use this input to develop an outreach plan and prepare materials for distribution when the rulemaking is completed. In addition, and as suggested by a number of ANPR commenters (*See, e.g.,* Document ID #0018, 0025, 0047, 0065, 0081, 0104, and 0154), OSHA will continue working with interested parties to examine projects that could be completed by them, or in coordination with them, that could be targeted to specific industries or interest groups.

OSHA solicited additional ideas for outreach or compliance assistance in the NPRM, and many commenters provided such information (*See, e.g.,* Document ID #0332, 0344, 0356, 0370, 0382, 0405, 0408, 0410, and 0414). There was a wide range of suggestions, including training programs, workshops, web resources, and enforcement tools addressing different aspects of the modified standard. OSHA has already developed some compliance assistance products—or updated products available for the existing standard—and will be developing and distributing these and others as resources are made available. There are also tools being developed internationally that will be available for employers undertaking compliance, such as training materials in preparation by the United Nations Institute for Training and Research (UNITAR). OSHA has provided support to this activity, and expects these materials will be made available on its Web site when completed. OSHA encourages trade associations, professional societies, and others to develop materials that are specific to certain interest groups or industries, thus providing a more focused compliance assistance approach than can be done by OSHA at the national level.

The final standard. The following is a description of the provisions of the final standard, along with a discussion of what was proposed and the information provided by rulemaking participants. As noted above (and supported by rulemaking participants), OSHA's approach has been to confine changes to the standard to those required to align it with the GHS. Therefore, provisions that do not require changes for that purpose have been left the way they are in the current HCS. While participants supported this approach in general, suggestions were made that involved changes to the current text in areas unaffected by the GHS. Since OSHA did not propose to

open these parts of the rule in the proposed rulemaking, and the analyses did not involve such changes, the Agency will not be adopting them in the final rule.

Similarly, as OSHA indicated in the NPRM, the Agency's approach was also to be as consistent as possible with the GHS itself. Editing was limited to what was required to make the provisions mandatory in the context of OSHA rulemaking, and using the regulatory language required for that purpose. Additionally, as described in the NPRM, OSHA did not propose adopting language from the GHS that was strictly provided for guidance purposes (such as the decision logics in the chapters in the GHS that describe the physical and health hazard criteria). There is no question that other changes could be made to the language to make it more readable, or to state it in American English. However, introducing different terminology also introduces the possibility that readers will believe that OSHA means something different than the GHS because we have used different language. Since this is not the intent, the Agency has avoided doing this.

Nevertheless, many such editorial changes were suggested. While OSHA has reviewed all of them, and adopted a few that seemed appropriate or necessary, in general the Agency did not engage in extensive editing of agreed text for fear of changing the meaning, or giving the impression that the meaning has changed. In particular, Dow Chemical submitted extensive suggested edits in both its initial comments on the NPRM and in post-hearing comments (Document ID #0353 and 0526). Most of these issues were not raised by any other participants. Given the large number of such editorial suggestions from Dow, OSHA does not discuss each one in this preamble, but simply notes where changes have been made to the text. OSHA, however, gave each of Dow's suggestions full consideration.

(a) Purpose. The HCS includes a paragraph that states the purpose of the rule. This stated purpose is two-fold. First, the paragraph indicates that the standard addresses assessment of the hazards of workplace chemicals, and the transmittal of that information to employers and employees. It also describes the contents of a comprehensive hazard communication program as being container labeling and other forms of warning, material safety data sheets, and employee training.

The second part of the paragraph addresses the preemption of State or local laws by this Federal standard. It indicates that OSHA is addressing comprehensively the issues described, and thus the standard preempts States, and political subdivisions of States, from addressing these issues except under the authority of a Federally-approved State plan under Section 18 of the OSH Act. While Section 18 applies to every occupational safety and health standard that OSHA promulgates, the HCS raises particular issues because of the nature of the provisions. It requires chemical manufacturers and importers to evaluate the hazards of the chemicals they produce or import, and to prepare labels and safety data sheets based on those evaluations to transmit hazard information and appropriate precautionary advice to users downstream. This is a unique but highly appropriate approach for an OSHA standard, as it recognizes that chemical manufacturers and importers are in the best position to assess the hazards of their products and develop appropriate information for labels and SDSs.

There is a national, indeed international, marketplace for industrial chemicals, and thus chemical manufacturers and importers affect commerce within the meaning of the OSH Act and therefore fall under OSHA's jurisdiction. If a State, or a political subdivision of a State, were to establish different requirements for labels and safety data sheets, such requirements would have an impact on chemical manufacturers and importers that are not located in that State. This is a burden that the HCS eliminates by establishing national requirements.

The proposed revisions to the HCS had essentially the same purposes, and thus the NPRM included only minor modifications to this paragraph. OSHA proposed to modify paragraph (a)(1) to change the language regarding the assessment of hazards to indicate that the hazards will be ''classified'' rather than simply assessed or evaluated. This is consistent with the approach in the GHS. In addition, OSHA proposed to modify this paragraph to clearly indicate that the standard is intended to be consistent with the GHS, Revision 3. That change is a reflection of the purpose of this rulemaking to harmonize the existing requirements with the provisions of the GHS, which is the international instrument that includes globally harmonized provisions on hazard communication. In addition, in this paragraph and succeeding paragraphs of the revised rule, the term ''material safety data sheet'' was modified to ''safety data sheet'' to reflect the terminology of the GHS.

The only modifications proposed to paragraph (a)(2) also addressed terminology, using ''classifying'' instead of ''evaluating'', and ''safety data sheet'' instead of ''material safety data sheet''.

There were a few comments that were related to the Purpose paragraph provisions. One comment suggested that the standard should be limited to a purpose of international communication so as not to trigger hazard assessments under other OSHA standards that address respiratory protection, personal protective equipment, or process safety management (Document ID #0049). There were several other comments that indicated that new assessments would have to be done for these standards (Document ID #0111, 0134, 0164, and 0178). Arguments were made that this would lead to extensive additional costs for new engineering controls, respirators, or other personal protective equipment.

As discussed above, there is no identified link to these other standards in the stated purpose of the HCS either currently or with the proposed modifications in the NPRM. While the current HCS and this final standard require the provision of information on recommended control measures, including respiratory protection, personal protective equipment, and engineering controls, there is no requirement for employers to implement the recommended controls. An employer should use all available information when designing an appropriate protective program, but a recommendation on a safety data sheet by itself would not trigger the need to implement new controls.

Furthermore, these comments seem to imply that there will be major changes in the classification of the hazards of chemicals as a result of implementation of the GHS provisions. Both the HCS and the GHS are based on identifying and communicating the inherent hazards of chemicals. Thus the biggest change for most chemicals under the final rule will be in categorizing the chemical's hazards. Under the current standard, for example, a chemical either is, or is not, a carcinogen. Under the revised HCS, if a chemical is a carcinogen, it would be categorized as a Category 1 or a Category 2 carcinogen. Such a change would provide additional information for the downstream user, but would not generally result in a need to change engineering controls or respiratory protection.

It is possible that a chemical may be classified under the final rule as having a hazard it did not have before, but OSHA believes that this is not likely to happen frequently given the broad coverage of the current rule. Furthermore, the physical and chemical characteristics of the chemical—which

affect the types of protection required—would not be changed as a result of this proposal. OSHA believes that these revisions would result in few, if any, changes in protective measures required under other OSHA standards.

Several commenters to the ANPR noted what they believed to be the continued need to address the preemption of State standards (*See, e.g.,* Document ID #0036, 0048, 0056, 0080, 0123, 0135, and 0178). In addition, commenters also noted that the impact of GHS adoption on State and local laws should be considered in the process (for example, California Proposition 65), and that differences between such laws and the revised HCS should be discouraged (Document ID #0015, 0038, 0042, and 0072).

It was also indicated that changes in State laws should be coordinated with the Federal changes to facilitate implementation (Document ID #0146). *See* Section VIII and IX of this preamble for a comprehensive discussion regarding Federalism and State plans.

There were a number of comments received in response to the NPRM that addressed the Purpose paragraph provisions. For example, the Styrene Information and Research Center (Document ID #0361) indicated that OSHA should revise paragraph (a)(1) to say that it is intended to be consistent with the GHS ''with some exceptions,'' since there are some deviations from the GHS. OSHA does not agree with this suggestion. The language proposed, and in the final rule, is accurate—it is consistent with the provisions of the GHS. The GHS is not a model regulation, and it is not intended that countries will adopt the actual text of the GHS. Furthermore, there is allowance for flexibility and differences where necessary to accommodate a country's specific needs. There was nothing in the NPRM that was inconsistent with the GHS, and neither is the final rule inconsistent.

Dow Chemical (Document ID #0353), argued that paragraph (a)(2) should state that OSHA is preempting personal injury suits alleging that labels provided inadequate warnings. The Industrial Minerals Association-North America (Document ID #0394) indicates that the new rule must make clear that it preempts state law tort claims alleging failure to warn. OSHA declines these invitations. As recently explained in the Solicitor of Labor's letter to Stephen Wodka, dated October 18, 2011, in general the HCS does not preempt state tort failure to warn lawsuits, and OSHA does not intend to change that position in the final rule. Indeed, the OSH Act's ''savings clause'' explicitly preserves, rather than preempts, State tort law. OSH Act § 4(b)(4), 29 U.S.C. 653(b)(4); *Lindsey* v. *Caterpiller, Inc.,* 480 F.3d 202, 209 (3d Cir. 2007); *Pedraza* v. *Shell Oil Co.,* 942 F.2d 48, 53–54 (1st Cir. 1991). While a limited preemption might be possible to the extent a state tort rule directly conflicted with the requirements of the standard, no commenter has provided any evidence of such a conflict. For example, the record contains no evidence that a manufacturer might be held liable under a State's tort law rules for complying with the GHS. However, to eliminate any confusion about the standard's preemptive effect, and to be consistent with the President's May 20, 2009 Memorandum on Preemption, OSHA has made two small changes to (a)(2) in the final rule, changing the words ''legal requirements'' to ''legislative or regulatory enactments'' in the provision's first sentence and eliminating the words ''through any court or agency'' in the last sentence.

Similarly, DuPont (Document ID #0329) says OSHA should convince States to voluntarily rescind their ''right-to-know'' laws, or make them consistent with the HCS final rule. And the National Paint and Coatings Association (NPCA) (Document ID #0328) believes that OSHA should not allow States to promulgate a standard that is different from the Federal rule. As indicated in paragraph (a)(2), States with OSHA-approved State Plans will have to adopt standards that are at least as effective as this final rule. (*See,* generally, 62 FR 31159, Jun. 6, 1997.) Those standards will be reviewed by Federal OSHA. Other States are preempted from covering these areas with regard to workplace protections. OSHA has no authority with regard to provisions that are intended to address non-workplace situations.

Therefore, OSHA has concluded that the changes it proposed to Paragraph (a) are appropriate, and those changes are being incorporated into the final rule. No other revisions are being made.

(b) Scope and application. The HCS is a generic standard that has very broad provisions in terms of chemicals addressed and workplaces covered. It also interfaces with a number of requirements of other Federal agencies that address labeling of chemical hazards. Paragraph (b) thus includes all of the practical modifications the Agency has developed to ensure that employers and employees understand how the standard is to be applied, and to accommodate various circumstances that potentially affect the application of the standard.

The provisions of paragraph (b)(2) in the HCS address the overall scope of the standard as applying to ''any chemical which is known to be present in the workplace in such a manner that employees may be exposed under normal conditions of use or in a foreseeable emergency.'' This provision addresses many questions that are raised about the application of the standard.

In general, OSHA does not expect significant changes in the chemicals covered by the HCS under the final rule as compared to the current standard. The scope of hazards covered by the GHS is very similar to what is covered by the current HCS. Additional chemicals may be considered to be acutely toxic due to the proposed adoption of Category 4 in acute toxicity, which would expand the criteria for inclusion from the current definition (*See* the discussion under ''Hazard classification''). However, these chemicals are already covered under the voluntary national industry consensus standard on precautionary labeling of industrial chemicals that many manufacturers follow in their labeling programs (ANSI Z400.1/Z129.1–2010, *Hazardous Chemicals—Hazard Evaluation and Safety Data Sheet and Precautionary Labeling Preparation),* as well as being covered in the requirements that apply to chemicals shipped to the EU. Thus many manufacturers are already classifying and labeling these chemicals as acute toxins. The final rule is also likely to cover fewer mixtures as acute toxins than the current rule given the hazard classification approach in the GHS that uses a calculation based on proportionality to determine whether a mixture is covered, rather than the strict percentage cut-off of 1% in the current HCS. Other definitions of health hazards would maintain the current broad HCS scope.

In addition to the overall scope statement, the final rule, like the current rule, provides for limited coverage in workplace situations that have special circumstances, including laboratories (paragraph (b)(3)) and work operations where employees only handle chemicals in closed containers (paragraph (b)(4)).

OSHA also addresses the interface with other Federal agency requirements by either exempting the products covered from additional OSHA labeling (such as pesticides required to be labeled by the EPA) (paragraph (b)(5)), or completely exempting the product (such as hazardous waste regulated by EPA) (paragraph (b)(6)). These accommodations help to ensure that

Federal requirements do not conflict or duplicate each other.

Under the GHS, such provisions are left under the purview of the ''competent authority.'' In developing the GHS, it was recognized that countries' regulatory authorities would need to have the discretion to address such national circumstances in ways that are suited to the regulatory perspective of the country. Thus authorities such as OSHA are free to make determinations about scope and application issues while still being harmonized with the primary provisions of the GHS.

OSHA reviewed the current provisions of paragraph (b), and determined that no significant changes were required to be consistent with the GHS. Several minor changes to revise terminology were retained from the proposal (*i.e.,* adopting the terms ''classifying'' and ''safety data sheets''), but OSHA is not modifying any of the remaining provisions of paragraph (b). The Agency is also deleting Appendix E of the current HCS, which was guidance for application of the standard, and thus is deleting the reference to it in paragraph (b)(1). The Sheet Metal and Air Conditioning Contractors National Association (SMACNA) (Document ID #0415) suggested in response to the NPRM that OSHA update Appendix E and continue to include it in the standard. OSHA will update Appendix E, and make it available as a compliance assistance product. It was always available as a pamphlet in any event, and has been very useful in helping small employers who are users of chemicals comply with the standard. And as noted above, new outreach and compliance assistance materials are being prepared as well.

Several commenters to the ANPR indicated that OSHA should adopt exemptions included by the European Union in its requirements. Specifically, these exemptions address non-isolated intermediates, chemicals involved in research and development, and waste (Document ID #0049, 0134, and 0164). In response to the NPRM, the Society of the Plastics Industry (SPI) (Document ID #0392) continued to argue that the EU exemptions should be adopted. All of these situations are already addressed in paragraph (b), and OSHA does not agree that it is appropriate or necessary to change them.

In terms of non-isolated intermediates, the overall scope provision in paragraph (b)(2) adequately addresses this situation. This was described in the preamble to the 1983 final rule (48 FR 53335, Nov. 25, 1983):

> That is, the term ''known'' means the employer need not analyze intermediate process streams, for example, to determine the presence or quantity of trace contaminants. However, where the employer knows of such contaminants, and they are hazardous, then they fall under the provisions of the standard.

With regard to chemicals involved in research and development, paragraph (b)(3) limits coverage in laboratories, and partially addresses this situation. Where there is no knowledge of the hazards of such chemicals, the HCS does not apply at all since there is no requirement to generate new hazard information. Where information is available, it must be provided to exposed employees, consistent with paragraph (b)(3) when it is in a laboratory situation. Therefore, it appears to OSHA that this situation is also adequately addressed under the current provisions. Hazardous waste as regulated by EPA is already exempted under paragraphs (b)(6)(i) and (ii).

The North American Metals Council (NAMC) (Document ID #0377) argued in response to the NPRM that OSHA should use the EU approach to exempt metals in their massive form, alloys, and other preparations that do not present a hazard. Provisions already exist in the current HCS, and are included in the final rule, that address these issues (*See, e.g.,* definition of article (paragraph (c)), special labeling provisions for solid metals (paragraph (f)(4))).

There were commenters who suggested that OSHA maintain current exemptions or limitations in the revised GHS, including the consumer product exemption (Document ID #0064), guidance on byproducts (Document ID #0064), the relative roles of manufacturers and employers (Document ID #0064), and the article exemption (Document ID #0160). OSHA agrees and all of these accommodations remain the same in the revised rule. The Agency is not changing those parts of the HCS that are not affected by the GHS.

There were also a few comments regarding the scope of the revised rule in terms of provisions of the GHS that affect the environment or transportation (*See, e.g.,* Document ID #0072 and 0179). OSHA does not have the authority to require information in these areas since they are not directed to the protection of employees under its jurisdiction. However, OSHA does not prohibit this type of information on labels or safety data sheets, and is aware that it is often included on labels and safety data sheets currently developed to comply with the HCS. OSHA expects that chemical manufacturers will continue to voluntarily include such data on their labels and safety data sheets to meet the requests of their domestic and international customers. Commenters to the NPRM continued to state that OSHA should allow environmental information although it is not required (Document ID #0344 and 0381). OSHA maintains the position proposed that manufacturers are free to provide additional information on labels and safety data sheets to address environmental concerns, as well as aspects of concern in other areas such as transportation. (74 FR 50387, Sept. 30, 2009)

Few comments were received on this paragraph in the NPRM. Dow Chemical (Document ID #0353) suggested that paragraph (b)(5)(iv) be updated to reflect the changed name of the Bureau of Alcohol, Tobacco, Firearms, and Explosives (the word ''Explosives'' has been added to their name). This has been done. In addition, two typographical errors in (b)(6)(ii) have been corrected.

The North American Insulation Manufacturers Association (NAIMA) (Document ID #0411) states that OSHA has given unwarranted exemption by ceding authority for products regulated by other agencies. In particular, NAIMA is concerned about coverage by CPSC, and indicates that CPSC addresses the fire hazards of cellulose insulation, but not the health hazards, in its label requirements. NAIMA argues that OSHA should not allow consumer product labels to supersede OSHA requirements.

OSHA considered this issue at length in previous amendments to the HCS (53 FR 29822, 29834–38, Aug. 8, 1988; 59 FR 6126, 6150–52, Feb. 9, 1994; *See also* 52 FR 31852, 31862–63, Aug. 24, 1987). After noting that CPSC labels often do not contain all hazard information relevant to worker exposures, OSHA concluded that:

> OSHA nevertheless decided to permit the CPSC labels to suffice so as not to disrupt the extensive labeling conducted in accordance with those rules. OSHA believed that this could be justified on the basis that some information is provided on the labels that would be useful to workers, and that the requirement for MSDSs would provide what information is necessary to supplement the labels. 48 FR 53289. This additional information is critical to ensuring that training can be properly conducted, and that adequate protective measures are used in the workplace.

(53 FR 29834, Aug. 8, 1988; *See also* 59 FR 6151, Feb. 9, 1994.) Thus, under the current HCS, SDSs and employee training are required where employee exposure to a consumer product exceeds

the range that ''could reasonably be experienced by consumers when used for the purpose intended.'' 29 CFR 1910.1200(b)(6)(ix). OSHA sees no need to revisit this issue now, and in any event it is outside the scope of this rulemaking, which is aimed at the changes necessary to bring the HCS in conformity with the GHS.

A few comments were received in response to the ANPR regarding EPA labels for pesticides, noting that signal words in these labels would change if GHS is adopted (Document ID #0178), and noting that the requirements for these labels are dictated by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), which also controls the SDS content (Document ID #0108). A commenter also argued that FIFRA pesticide labels are more useful because they are risk-based rather than hazard-based (Document ID #0108). These concerns were not related to the proposal which maintained the exemption for additional labels on containers that are labeled in accordance with EPA requirements. If EPA decides to adopt the GHS, then labels for pesticides would be consistent with OSHA labels on other types of products. With regard to SDSs, these are required by the HCS, not FIFRA, and therefore such SDSs must be consistent with GHS provisions as adopted in this final standard.

A number of additional comments, and oral testimony, were received in response to the NPRM from representatives of the pesticide industry regarding potential conflicts between OSHA and EPA requirements (*See, e.g.,* Document ID #0352, 0385, 0387, and 0468). OSHA does not require additional labels on pesticides that require labels under EPA requirements. However, OSHA does have SDS requirements that must still be applied, and have been applied since the HCS first went into effect. Pesticide industry representatives believe that the SDS requirements as aligned with the GHS would conflict with the EPA-approved labels because they may have different information on them for OSHA than what is included in the pesticide label. For example, EPA has three signal words for pesticides (danger, caution, and warning), while OSHA will have the two specified by the GHS (danger and warning). There are also other differences. For example, chronic health effects are rarely addressed on pesticide labels as the risk mitigation measures are intended to minimize the possibility of their occurrence. However, OSHA would require such effects to be included when appropriate. The commenters also argue that EPA ''labels'' include any information related to the product, and thus SDSs would be preempted by the EPA labeling requirements. Therefore, they argue that pesticides should be exempted from the HCS. For example, the American Chemistry Council's Biocides Panel says the reasons for exempting pesticides are as follows (Document ID #0385):

> The principal reasons for this are: (i) Requiring GHS compliant SDS's but not pesticide labels will result in significant confusion in workplaces in which pesticides are used; (ii) imposing GHS-based SDS's would be inconsistent with EPA's interpretation of FIFRA, which includes all material that may be shipped with a pesticide, including SDS's, as part of its definition of labeling; and (iii) applying GHS to pesticide SDS's will not provide any additional substantive information, as EPA's evaluation of pesticides before approving them for sale includes all aspects of potential occupational exposures.

OSHA considered exempting pesticides from the final rule. However, exempting pesticides would reduce protections for those workers under OSHA's jurisdiction. For example, OSHA's jurisdiction extends to employees in pesticide manufacture and formulation. While EPA approves the label on the final product shipped out of these facilities, and that label includes information needed when the products are used by applicators, EPA does not have hazard communication requirements for the protection of workers in production facilities. Such protection is covered by OSHA, and OSHA requires labels on containers that are not subject to EPA labeling, as well as SDSs and training. The workplace exposures of these workers are of great concern. The chemicals are generally designed to be biologically active, and the exposures can be quite different than they would be for applicators, for example, who may use them only on an intermittent basis.

In testimony during the public hearing, representatives from the ACC Biocides Panel and CropLife America, Inc., agreed that EPA does not cover workers in pesticide manufacturing or formulating facilities (*See* Document ID #0495 Tr. 248–250). An exemption from the HCS would provide reduced protection for these workers.

As a result of receiving these comments, and the concerns about removing current protections from the final rule, OSHA considered several options. OSHA considered allowing the SDS preparer to use the EPA classification in section 2 of the SDS to ensure consistency with the FIFRA label. However, in doing this the SDS would then be inconsistent with other chemicals in the production of pesticides. In the pesticide manufacturing workplace the pesticide chemical ''active'' ingredients would bear a FIFRA label but would have an OSHA SDS, however other chemicals in the workplace such the ''inactive'' ingredients or cleaning products might still be considered hazardous under the HCS would contain an OSHA label and an OSHA SDS. An added complication is that an identical chemical (for example, chlorine) could potentially be in a pesticide manufacturing workplace where in one situation it could contain a FIFRA label and another it could bear an OSHA style label depending on its end use (e.g., a disinfectant). Adding a different SDS would create additional confusion not only for the worker handling the chemicals but also the personnel in charge of chemical management as well. Therefore, OSHA and EPA met to discuss what would be an appropriate resolution. First, with regard to the argument that SDSs are part of labels, and therefore preempted, EPA has long had an interpretation that they will not apply their review requirements to SDSs (US EPA Pesticide Registration Notices 92–04). Based on our discussions, OSHA does not anticipate that this policy will change. Secondly, EPA has indicated that they are committed to working with OSHA to develop an approach that will provide both appropriate protection for employees, as well as the environment, through workable guidance for the pesticide industry. OSHA anticipates that EPA will provide guidance to their regulated community (such as through a Pesticide Registration Notice) on how to develop an OSHA GHS-compliant SDS that will not be in conflict with the pesticide label. Therefore, pesticides will continue to be covered in the same manner as has been done under the HCS since its inception, and the exemption requested by pesticides industry rulemaking participants for such products is not granted.

Although the OSHA ICR (OMB Control No. 1218–0072) that is currently pending review and approval by OMB addresses the information collection activities associated with preparing the entire SDS as prescribed by the OSHA final rule, the approach OSHA anticipates will be provided in the EPA guidance for pesticide registrants was not considered by OSHA at the proposed rule stage. While OSHA preliminarily believes it has taken sufficient time in its paperwork estimate to cover compliance with the anticipated EPA guidance, the public has not had the opportunity to comment

on the paperwork burdens created by that guidance. As such, EPA and OSHA are collaborating on a subsequent revision to OSHA's ICR to ensure that it addresses the activities in the EPA guidance. EPA intends to solicit public comment on an ICR revision that addresses the information collection activities and related burden estimates associated with the EPA guidance as part of its release of that guidance. After public comments are considered by both agencies, OSHA intends to ask OMB to revise its ICR approval, identified under OMB Control No. 1218–0072, to capture the information collection activities and burden adjustments, if any, related to EPA's guidance.

(c) Definitions. This paragraph in the HCS includes the terminology used with the corresponding definitions. Comprehension of the appropriate definitions is critical to understanding the provisions of the standard. In some cases, terms are defined somewhat differently than when used in other contexts, so familiarity with the standard's definitions is important.

In the proposed revisions, OSHA retained as many definitions as possible from the current HCS. Changes were proposed only when there was a new term used that needed to be defined, or there is a different definition in the GHS, and consistency with the international definition was needed for harmonization purposes. As with the preceding paragraphs, minor modifications were proposed to ensure terminology is appropriate—primarily the use of terms related to classification and safety data sheets. These modifications were retained in the final rule. There were relatively few comments submitted on the proposed revisions to the definitions, other than those referring to the new definition OSHA proposed to address ''unclassified hazards'' and the definition for ''pictogram'' that references a red border frame.

One important difference between the HCS and GHS in terminology involves the use of the term ''chemical.'' The HCS has used this term since it was originally promulgated, and defines it to include elements, chemical compounds, and mixtures of elements and/or compounds. It has been a convenient way to describe the coverage of the rule. The GHS, like some other international standards, uses the terms ''substance'' and ''mixture''. OSHA has decided to retain a definition of ''chemical'' in the revised standard, which minimizes the number of terminology changes that have to be made to the regulatory text, as well as providing a shorthand way to define the scope to include both individual substances and mixtures of substances. This term is used in the body of the regulatory text of the final standard, similar to its use in the current HCS. However, the modifications also include definitions for ''substance'' as well as ''mixture'' to align with the GHS, and both of these terms are used as well. In particular, in the appendixes that are adopting GHS language, the separate terms ''substance'' and ''mixture'' are used consistent with the GHS.

''Substance'' means ''chemical elements and their compounds in the natural state or obtained by any production process, including any additive necessary to preserve the stability of the product and any impurities deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.'' Dow Chemical (Document ID #0353) objected to this definition, and suggested that it should be ''chemical elements and compounds in their natural state or obtained by any production process.'' OSHA has concluded that it is appropriate to maintain the GHS language for this definition to help to ensure consistent application, and thus the revised rule includes the definition of substance that was proposed.

A ''mixture'' is defined as a ''combination or a solution composed of two or more substances in which they do not react.'' This is consistent with the GHS definition—and while slightly different than the definition in the current HCS, means the same thing. Dow Chemical (Document ID #0353) suggested that OSHA maintain part of its current definition in order to avoid inadvertently changing the scope of coverage by adding ''if the combination is not, in whole or in part, the result of a chemical reaction.'' OSHA does not believe that the scope is changed by the GHS definition, and has retained the GHS-consistent language that was proposed.

OSHA also proposed to maintain the term ''hazardous chemical'' in this revised standard as used in the current standard (a chemical which is a physical or health hazard), except to add the term ''classified'' to indicate how it is determined that it is a physical or health hazard. OSHA also proposed to include unclassified hazards in this definition, but, as will be described below, has chosen a different approach in the final rule. Instead, the definition of ''hazardous chemical'' in this final rule is ''any chemical which is classified as a physical hazard or a health hazard, a simple asphyxiant, combustible dust, pyrophoric gas, or hazard not otherwise classified.'' The term is used throughout the standard to indicate that the classification process is completed, and the chemical manufacturer has determined that the chemical poses a hazard. Most of the substantive requirements of the rule apply to hazardous chemicals.

Dow Chemical (Document ID #0353) indicated that OSHA should drop the use of the word ''substance'' altogether, and instead use the word ''chemical.'' As noted in the definition of ''chemical,'' however, it is to be used when a reference is to both substances and mixtures. Where a provision or statement refers only to a substance, or only to a mixture, those terms are used in lieu of ''chemical'' or ''hazardous chemical.'' These individual designations are used most commonly in the appendixes, particularly in the classification criteria. OSHA has maintained consistency in the criteria with the GHS insofar as is possible with regard to this terminology.

Another proposed modification to the definitions paragraph was to move the specific physical hazard definitions to an appendix. In the current HCS, health hazard definitions are addressed specifically in Appendix A, but the physical hazard definitions were included in paragraph (c). In the final standard, health hazard definitions continue to be addressed in Appendix A, but a new Appendix B addresses physical hazards. Both of these appendixes are discussed below under the summary and explanation of paragraph (d) ''Hazard Classification.''

As noted in Section III above, the physical hazard definitions in the GHS are drawn from the United Nations' Recommendations on the Transport of Dangerous Goods. Since DOT has already adopted this international approach, the GHS definitions are substantially harmonized with the U.S. requirements for labeling of dangerous goods in transport. All chemicals that are shipped in the U.S. have already been classified according to DOT's physical hazard definitions. This will reduce the burdens associated with classifying physical hazards under the revised HCS. The primary differences involve exceptions that make the definitions more applicable to workplace situations (for example, coverage of flammable liquids that are currently defined as combustible under the HCS). Modifying the HCS to align with the GHS thus serves the purpose of harmonizing many of these definitions domestically, and results in shippers only having to classify their chemicals once for most physical hazards.

OSHA also has updated the definition of the term ''classification'' to reflect the additional hazards in this final rule (simple asphyxiant, combustible dust, and pyrophoric gas). The definition for classification will now read: ''Classification means to identify the relevant data regarding the hazards of a chemical; review those data to ascertain the hazards associated with the chemical; and decide whether the chemical will be classified as hazardous according to the definition of hazardous chemical in this section. In addition, classification for health and physical hazards include the determination of the degree of hazard, where appropriate, by comparing the data with the criteria for health and physical hazards,'' Dow Chemical (Document ID #0353) suggested that the language be changed to read ''for health hazards and for physical hazards.'' OSHA does not find this to be a necessary revision, and has adopted the definition as proposed. This definition is very similar to the process of hazard determination that is currently in the HCS, with the exception of determining the degree of hazard where appropriate. This reflects the GHS approach of having categories for each class of hazard. Under the current HCS, there are some definitions that have categories in a hazard class (*e.g.,* acute toxicity, flammability), but other definitions are simply one category (*e.g.,* carcinogenicity). The additional breakdown in the GHS of classes into categories that reflect different severities or levels of effect will provide both employers and employees with more precise information to understand the hazards, to consider when evaluating workplace conditions to determine the risks in the workplace, and to respond to exposure incidents.

OSHA has also retained in the final rule the proposed definitions for ''hazard class'' and ''hazard category'' to further explain the approach of breaking down the hazardous effects into levels of severity. A ''hazard class'' is defined as ''the nature of the physical or health hazards, *e.g.,* flammable solid, carcinogen, oral acute toxicity.'' The definition of ''hazard category'' is ''the division of criteria within each hazard class, *e.g.,* oral acute toxicity and flammable liquids include four hazard categories. These categories compare hazard severity within a hazard class and should not be taken as a comparison of hazard categories generally.'' Both of these definitions are taken from the GHS. Dow Chemical (Document ID #0353) suggested that the last sentence of the definition of ''hazard category'' should be deleted or moved to Appendix A because it is ''non-definitional information.'' Given that it is included in the GHS definition, OSHA has adopted it in the final standard.

OSHA has retained the proposed definition of ''health hazard'' to reflect the specific hazards defined in the GHS. While the overall scope of what is covered is essentially the same as the current HCS, the hazards may be identified slightly differently. For example, the current HCS covers reproductive toxicity as a target organ effect, and includes all aspects of the effect under that hazard. The GHS has a separate definition for germ cell mutagenicity, which is considered part of reproductive toxicity in the current HCS. The definition of ''health hazard'' was thus proposed to be ''a chemical which is classified as posing one of the following hazardous effects: acute toxicity (any route of exposure); skin corrosion or irritation; serious eye damage or eye irritation; respiratory or skin sensitization; germ cell mutagenicity; carcinogenicity; reproductive toxicity; specific target organ toxicity (single or repeated exposure); or aspiration hazard. The criteria for determining whether a chemical is classified as a health hazard are detailed in Appendix A to § 1910.1200—Health Hazard Criteria.''

Both the American Chemistry Council (ACC) (Document ID #0393) and Dow Chemical (Document ID #0353) suggested that OSHA modify the phrase ''any route of exposure,'' which refers to ''acute toxicity.'' ACC suggested it list the three specific routes of exposure in the criteria, and Dow suggested that it include ''relevant'' to modify routes of exposures. OSHA does not believe either of these changes is necessary. The definition already uses the term ''classified'' to refer to each of the health hazards listed, and the acute toxicity criteria include three routes of exposure for classification. Dow further suggested that ''serious eye damage'' be modified to say ''by chemical action.'' Again, the classification process is for chemicals, and the definition already indicates that it is covered as a health hazard when classified. Similarly, Dow suggested that ''aspiration hazard'' be modified to say ''aspiration toxicity hazard.'' The proposed language is consistent with the GHS, and OSHA is maintaining it for harmonization purposes in the final standard.

A revised definition of ''physical hazard'' was proposed to reflect the physical hazards covered in the GHS. While these are similar to the coverage of the HCS, they are in some cases described differently. The definition proposed for ''physical hazard'' is ''a chemical that is classified as posing one of the following hazardous effects: Explosive; flammable (gases, aerosols, liquids, or solids); oxidizer (liquid, solid or gas); self-reactive; pyrophoric (liquid or solid); self-heating; organic peroxide; corrosive to metal; gas under pressure; or in contact with water, emits flammable gas. *See* Appendix B to § 1910.1200—Physical Hazard Criteria.'' This definition has been adopted in the final standard with one change. OSHA did not include pyrophoric gas in the definition in the proposal. There is no definition for pyrophoric gas in the GHS, which is covered under the current HCS, and OSHA inadvertently left it out in the proposed standard when the generic definition for pyrophorics was removed. This omission was pointed out by commenters (*e.g.,* Document ID #0382 and 0530). OSHA is therefore returning the pyrophoric gas definition from the current rule to paragraph (c), and making it specific to just gases since the current rule covers all physical states. Thus, pyrophoric gas is defined as ''a chemical in a gaseous state that will ignite spontaneously in air at a temperature of 130 degrees F (54.4 degrees C) or below.'' Label elements are provided in C.4.30. The signal word will be danger; the pictogram is the flame; and the hazard statement is ''Catches fire spontaneously if exposed to air.''

Procter & Gamble (Document ID #0381) noted that the definition for ''flashpoint'' was missing from the NPRM and suggested that it should be put back into the rule. However, the meaning of the term ''flashpoint'' is already addressed in the criteria for ''flammable liquid'' in Appendix B by specifying the test methods to determine it. OSHA has also included a definition for flashpoint in the criteria chapter, rather than in the definitions paragraph.

The definition of ''label'' in the GHS is slightly different than what is currently in the HCS, and OSHA proposed to modify the HCS to be consistent with the GHS. The proposed definition of ''label,'' which has been retained in the final rule, is ''an appropriate group of written, printed or graphic information elements concerning a hazardous chemical that is affixed to, printed on, or attached to the immediate container of a hazardous chemical, or to the outside packaging.'' The GHS label is more specific than what is required in the current HCS, and includes certain core information that must be presented. Thus, a definition for ''label elements'' was also proposed and adopted in the final rule as ''the specified pictogram, hazard statement,

signal word, and precautionary statement for each hazard class and category.'' ACC (Document ID #0393) noted that this definition is different from what is in the GHS. OSHA modified the definition by making it plural to reflect the way it is used in this section to refer to the OSHA-required label elements for each GHS label. The GHS definition in this case defines the singular term ''label element'' as ''one type of information that has been harmonized for use in a label, *e.g.,* pictogram, signal word.'' OSHA has listed all of the label elements, including precautionary statements since they are mandatory under the revised rule. OSHA believes its definition is consistent with the GHS but more appropriate for the revised rule, and has adopted it in this final standard.

''Safety data sheet (SDS)'' is defined in both the NPRM and the final rule as ''written or printed material concerning a hazardous chemical which is prepared in accordance with paragraph (g) of this section.''

Definitions for terms that describe information required to be provided on labels were also proposed to be added to the HCS and are included in the final rule. These terms include ''hazard statement,'' ''pictogram,'' ''precautionary statement,'' ''product identifier,'' and ''signal word.'' These new definitions will help to clarify the specific requirements for labels under the revised HCS, and are consistent with similar definitions in the GHS.

''Hazard statement'' is ''a statement assigned to a hazard class and category that describes the nature of the hazards of a chemical, including, where appropriate, the degree of hazard.'' This is essentially what is defined as a hazard warning under the current rule. An example of a hazard statement under the GHS is: ''Causes serious eye damage.'' These statements have been codified, meaning that numbers have been assigned to them. They are available in all of the official languages of the United Nations, and thus translation will not be a problem when shipping to countries using those languages. Having standardized statements is expected to facilitate translation into other languages as well. The definition for ''hazard statement'' is being adopted as proposed.

There were a few comments about specific hazard statements, such as an objection from the National Propane Gas Association (Document ID #0400) indicating the statement for flammable gas is ambiguous, and lacks substantiation and scientific credence. They object to labeling propane as ''extremely flammable,'' which is the required statement for Category 1 for flammability hazards. This objection was also raised in a comment to the ANPR (Document ID #0068). OSHA responded in the NPRM that it would not be making chemical-specific changes to hazard statements (74 FR 50399, Sept. 30, 2009). The point of having harmonized statements is that all chemicals with the same degree of hazard have the same statement. OSHA also indicated that some in the industry already use the ''extremely flammable'' terminology. NPGA responded that not everyone is familiar with it, or uses it. That is why OSHA is establishing a standardized approach, so everyone in an industry with a common product like propane uses the same language to convey the hazard. This consistency will help people understand what the hazards are, and simplify the process of conveying them since everyone will use the same approach. As noted previously, examples of where the hazard statement ''extremely flammable'' are currently being used for propane are readily found (*e.g.,* Document ID #0554). Therefore, OSHA does not agree with NPGA that the hazard statement is inappropriate or should be modified.

A few commenters suggested that where hazard statements include two hazards, separating them should be permitted when data indicate that only one is applicable to the product involved (for example, it causes infertility but not developmental hazards) (Document ID #0344, 0376, 0377, 0381, 0382, and 0393). OSHA agrees that such separation should be permitted. The following provision has been added to Appendix C.2.2.2: ''If the chemical manufacturer, importer, or responsible party can demonstrate that all or part of the hazard statement is inappropriate to a specific substance or mixture, the corresponding statement may be omitted from the label.''

Additionally, OSHA permits chemical manufacturers and importers to combine hazard statements where the information is related and the combination can shorten the text required on the label. Appendix C.2.2.1 states: ''Hazard statements may be combined where appropriate to reduce the information on the label and improve readability, as long as all of the hazards are conveyed as required.'' OSHA also allows additional hazard statements under supplementary information, as long as they are accurate and do not conflict with the required statements. ''Pictogram'' is defined as a ''composition that may include a symbol plus other graphic elements, such as a border, background pattern, or color, that is intended to convey specific information about the hazards of a chemical.'' This definition covers both pictograms in the transport sector, and those in other sectors covered by the GHS. The pictograms are required as part of the core information provided on a label to describe the hazards of a chemical. ACC (Document ID #0393) and Procter & Gamble (Document ID #0381) noted that the proposed definition of pictogram, which was retained in the final rule, is slightly different than what is in the GHS: ''a graphical composition that may include a symbol plus other graphic elements, such as a border, background pattern, or color, that is intended to convey specific information.'' OSHA added ''about the hazards of a chemical'' because that is the only type of information that will be conveyed by the pictograms in the HCS. The definition is being adopted as proposed.

The workplace pictograms proposed were a black symbol on a white background with a red diamond border frame. Some ANPR commenters noted that the frame should be permitted to be black for domestic shipments as allowed under the GHS (*See, e.g.,* Document ID #0032 and 0163). However, as described in Section IV of the proposed preamble, there are clear safety and health benefits associated with the use of the red frame in terms of recognition and comprehensibility. Thus OSHA proposed to allow only the red frame to be used, whether the shipment is domestic or international.

Many of the rulemaking participants recognized the communication benefits of the red border, and supported the proposed requirement for a red border frame for all shipments (*See, e.g.,* Document ID #0313, 0324, 0330, 0335, 0336, 0339, 0341, 0365, 0383, 0408, 0410, 0412, and 0456). For example, Product Safety Solutions (Document ID #0313) stated:

> OSHA requests comment on whether pictogram borders should be required to be in red or should be allowed to be printed in black. While the use of a red border may increase the cost of printing some labels, the use of color to draw attention to a potential hazard is a useful tool and is likely to enhance the communication of safety information. As products may also be exported to other countries, the use of the red border would be consistent with the establishment of a globally recognized hazard symbol. Imported products likewise, would have to contain the red symbol border and this would have to be made abundantly clear to Customs Agents and others responsible for monitoring the importation of chemical products.

However, others argued that black frames should be permitted on domestic shipments, and that the use of red borders is too costly and burdensome in terms of printing costs in particular (*See, e.g.,* Document ID #0328, 0338, 0344, 0352, 0370, 0376, 0389, 0399, 0405, and 0411). For example, ISSA (Document ID #0399) claims:

> If OSHA were to require only the red frame for pictograms, it would require those formulators that presently print single color labels to utilize different systems for producing labels of this nature, requiring a substantial capital investment which in turn will add greatly to the cost of transitioning to the revised HCS. OSHA must keep in mind, that small and medium sized formulators handle hundreds of products, each of which in turn are sold under multiple private labels. Thus a change in color requirements for labels generally will literally require a formulator to revise hundreds, if not thousands, of individual labels.
>
> Further, we believe the use of a black frame will not present a threat to worker health and safety. ISSA disagrees with OSHA's conclusion that a red frame would significantly enhance the communicative value of the label. In citing studies, OSHA does not take into account that the use of the new labels will be the subject of intensive employee training that will more than mitigate the use of a black frame over a red frame.

In the NPRM regulatory analyses, OSHA did not assess the specific costs associated with red versus black borders, but has done so in the analyses for the final rule. *See* Section VI. As noted by proponents of the black border option for domestic shipments, the costs of a red border are greater. However, OSHA's analysis shows that they are economically feasible. In addition, OSHA believes that it is likely additional, cheaper printing options will be developed to comply with this requirement in the final rule. The EU requires red frames for pictograms: ''Hazard pictograms shall be in the shape of a square set at a point. They shall have a black symbol on a white background with a red frame sufficiently wide to be clearly visible.'' (*http://europa.eu/legislation_summaries/internal_market/single_market_for_goods/chemical_products/ev0013_en.htm*) Application of this requirement in the twenty-seven (27) EU member states is expected to lead to new printing options for compliance.

OSHA believes that the increased comprehension that will be provided by the red border frame is compelling. The red color will clearly delineate the hazard symbols from the other information on the label, and the prominence will lead to increased attention and recognition of the hazards. The transport labels and placards that have been in use for many years have multiple colors in their pictograms, and yet compliance has been achieved. Plus most product labels have various colors related to their logos, brands, etc., so clearly it can be done.

There are also some logistical issues that would make compliance more difficult with two different colored frames. First, it is unlikely that it would always be known whether a product would be exported at the point of labeling it at the end of the manufacturing process. Many containers are simply shipped to distributors, and the original manufacturer does not know where they will be sent after that—thus raising the question of whether a manufacturer or importer would know when to apply a black versus a red frame. In addition, workers exposed to chemicals purchased from different sources might have different frames, requiring additional training to avoid potential confusion. The final rule remains as proposed, and requires pictograms to have a red frame, with a black symbol on a white background, for all shipped chemicals regardless of destination.

Several commenters (Document ID #0318, 0382, and 0393) also raised issues regarding whether pre-printed labels with blank red frames could be used. The manufacturer would simply add the symbols to the frames when printing the required label information. If a manufacturer or importer took this approach, a particular label might have one or more empty red diamonds in addition to any required pictograms. OSHA does not believe that this would be appropriate. Blank frames would still attract attention, but workers could be confused about what they mean and whether something is missing from the information. While blank frames could be marked to indicate they are intentionally left blank, they will still contribute to clutter on the label and distract from the primary messages (*See, e.g.,* Document ID #0284). Blank frames are not considered acceptable by DOT. (*See* 49 CFR 172.401, Prohibited labeling; PHMSA Interpretation 02–0088). OSHA does not believe this is a good alternative for compliance either, and the final rule prohibits blank frames on the label (Appendix C.2.3.1).

Under the GHS, a symbol is generally assigned to each hazard class and category. There are nine agreed symbols under the GHS to convey the health, physical and environmental hazards. Eight of these symbols were proposed for adoption in this rulemaking, the exception being the environmental symbol. Six of these symbols have been used for many years in the international transport requirements, so some employers and employees will already be familiar with them.

The symbols in the proposed rule are adopted in the final rule. Dow Chemical (Document ID #0353) noted that the pictograms are not entirely self-evident. While this may be true, the rule requires training workers so they will know what the symbols mean and how to respond.

It should be noted that in the NPRM, the pictogram for C.4.17 (oxidizing gases) was published with a ''flame'' symbol, rather than the ''flame over circle'' symbol that was appropriate, and was described. OSHA has corrected this error in the final rule, and has inserted the appropriate ''flame over circle'' symbol in Appendix C.4.17 for oxidizing gases.

The ''precautionary statement'' is ''a phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical, or improper storage or handling.'' The precautionary statements specified in Appendix C will be required on containers under the final rule. An example of a precautionary statement is: ''Wear protective gloves.'' The precautionary statements in the GHS are assigned to certain hazard classes and categories.

Precautionary statements are not required under the current HCS, although many chemical manufacturers include them on their labels for safe handling and use. These statements are codified under the GHS, meaning that numbers have been assigned to them. The precautionary statements in the GHS are not harmonized like the hazard statements are, and the regulatory authority is free to use the statements in the GHS annex or to use alternative statements when adopting the current version of the GHS. Using the GHS statements has the advantage of adopting statements that have undergone expert review by the UN Sub-committee, are assigned to the appropriate hazard class and category, and have been translated into six languages. Work continues on them in the Sub-committee to combine or edit the precautionary statements to reduce repetition and the complexity of the label. The precautionary statements may be considered harmonized in the future.

Other countries are already using them (*e.g.,* in Europe). Since OSHA did not previously require the use of precautionary statements, and had no such recommended statements to provide, the Agency decided to use those in the GHS as the mandatory

requirements. This will make it easier for compliance since chemical manufacturers and importers will not need to develop, maintain, and translate precautionary statements on their own. It will also help employees since they will be seeing the same language on labels regardless of the supplier of the chemical. Such standardization improves comprehension, and thus the effectiveness of the information transmitted under the standard.

While the definition of precautionary statement itself did not seem to raise questions with rulemaking participants, there were a number of comments on the proposal to make the GHS precautionary statements mandatory. Many commenters agreed with OSHA that the statements should be on the label, and should be mandatory (Document ID #0328, 0329, 0335, 0336, 0347, 0352, 0365, 0370, 0372, 0377, 0379, 0389, 0402, 0408, 0410, 0412, and 0456). Commenters mentioned increased comprehensibility, as well as available translations, as some of the reasons why they support this approach. It was also noted by a number of commenters that OSHA should permit additional precautionary statements to cover situations without an available statement in Appendix C (Document ID #0313, 0324, 0327, 0329, 0335, 0352, 0365, 0370, 0376, and 0402). Others supported making them mandatory when they are harmonized in the GHS (Document ID #0351 and 0405). And at least one participant argued that precautionary statements should not appear on labels, just SDSs (Document ID #0338).

Other commenters did not support the mandatory approach, and thought that manufacturers should be able to continue to use their own precautionary statements (Document ID #0321, 0330, 0344, 0353, 0363, 0376, 0381, 0382, 0393, and 0399). It was also suggested that the UN needs to provide further guidance on when precautionary statements can be combined or omitted (Document ID #0328, 0370, and 0376), or that the number of phrases appearing on a label should be limited (Document ID #0329 and 0405).

In the final standard, OSHA has maintained the proposed provision to require the precautionary statements in the GHS to be used on labels. As noted previously, the use of prescribed precautionary statements is consistent with the other label elements, and provides the significant benefits of improved communication of information through increased comprehensibility and familiarity. In terms of flexibility, chemical manufacturers and importers are free to put additional precautionary statements on the label from other sources in the supplementary information area. As long as the information provided is accurate, and does not conflict with the required information, this is permitted.

OSHA will also permit the statements to be combined as appropriate, and states in Appendix C.2.4.6: ''Precautionary statements may be combined or consolidated to save label space and improve readability. For example, ''Keep away from heat, sparks and open flame,'' ''Store in a well-ventilated place,'' and ''Keep cool'' can be combined to read ''Keep away from heat, sparks and open flame and store in a cool, well-ventilated place.''

In addition, where there are concerns, supported by evidence, about the applicability of a statement to a particular product, the chemical manufacturer or importer may revise the statements as appropriate for the situation. Appendix C.2.4.8 states: ''If the chemical manufacturer, importer, or responsible party can demonstrate that a precautionary statement is inappropriate to a specific substance or mixture, the precautionary statement may be omitted from the label.''

Thus, the final rule adopts the precautionary statements, which are taken from the GHS. However, it allows the use of additional statements where necessary, as long as they are accurate, do not conflict, and are placed in supplementary information. Additionally, chemical manufacturers and importers can use their judgment to combine related statements to shorten the amount of information on a label, as well as omit any statements that can be demonstrated to be inapplicable to the particular chemical involved. OSHA believes this approach maximizes the comprehensibility of the precautionary statements, as well as simplifies compliance for employers. Nevertheless, there are allowances for unique situations, and thus assurances that the information will be accurate.

It was suggested that the precautionary statements should be written in plain language (Document ID #0321). There were some specific changes to particular statements that were suggested (such as a statement regarding fighting fires near explosives, Document ID #0353). OSHA is not going to modify any of the statements as published in the GHS in terms of technical information. These have been reviewed by many experts. Changes should only be made to them through the UN Sub-committee process at this point, as they are close to being harmonized.

However, OSHA has made a few minor changes to precautionary statements in this final rule to address clarity and related issues. These changes were adopted by the Sub-committee of Experts on the GHS at its December 2010 meeting, and are expected to be included in Revision 4 of the GHS. Most changes simply amend the precautionary statement to clarify its meaning by making the statement more concise, or stating it in plain language. Others either provide added flexibility in applying the precautionary statement, or provide instructions for the classifier on the conditions relating to use of the precautionary statement. Examples of each type are presented below.

Examples of precautionary statements for physical hazards that were clarified in the final rule are presented below:

Precautionary statement in proposed rule	Precautionary statement in final rule
Keep away from any possible contact with water.	Do not allow contact with water.
In case of fire: Use * * * for extinction.	In case of fire: Use * * * to extinguish.

An example of a precautionary statement providing instructions for the classifier on the conditions relating to use of the precautionary statement is provided below for the health hazard class Skin corrosion/irritation, Category 1A to 1C (for the illustration, the instructions for use are provided in italics). In this example, note that the precautionary statement was clarified and the conditions relating to use of the precautionary statement were added.

Precautionary statement in proposed rule	Precautionary statement in final rule
Immediately call a poison center/or doctor/physician.	Immediately call a poison center/ doctor/ * * * *Chemical manufacturer, importer, or distributor to specify the appropriate source of emergency medical advice.*

The final example of the precautionary statement changes is provided below for instructions for the classifier on the conditions relating to use of the precautionary statement. In certain situations, text in a precautionary statement may not be appropriate. To address this issue, a new paragraph C.2.4.5 has been added to explain the use of text provided in square brackets ([ ]). Paragraph C.2.4.5 states: ''Where square brackets ([ ]) appear around text in a precautionary

statement, this indicates that the text in square brackets is not appropriate in every case and should be used only in certain circumstances. In these cases, conditions for use explaining when the text should be used are provided. For example, one precautionary statement states: ''[In case of inadequate ventilation] wear respiratory protection.'' This statement is given with the condition for use: ''text in square brackets may be used if additional information is provided with the chemical at the point of use that explains what type of ventilation would be adequate for safe use.'' This means that, if additional information is provided with the chemical explaining what type of ventilation would be adequate for safe use, the text in square brackets should be used and the statement would read: ''In case of inadequate ventilation, wear respiratory protection.'' However, if the chemical is supplied without such ventilation information, the text in square brackets should not be used, and the precautionary statement should read: ''Wear respiratory protection.''

OSHA has included these non-substantive, minor changes approved by the UN Sub-committee, because they make the statements more readable, allow added flexibility, and are consistent with the latest version of the GHS.

Container labels will also be required to include a ''product identifier.'' The proposed definition for this term, which was retained in the final rule with a clarifying change (discussed below), was ''the name or number used for a hazardous chemical on a label and in the SDS. It provides a unique means by which the user can identify the chemical. The product identifier used shall permit cross references to be made among the required list of hazardous chemicals, the label, and the SDS.'' In other words, the product identifier is essentially the same as the ''identity'' under the current HCS. The GHS allows competent authorities for workplace requirements to choose not to require specific chemical identities of ingredients to be listed on the label, as long as they are on the SDS. This is the approach OSHA currently uses in the HCS, and it has been effective. OSHA will continue to require chemical identities only on SDSs, and has proposed a definition for ''product identifier'' that is consistent with the current definition for ''identity'' (which has been deleted from the final rule) to maintain this approach. ACC (Document ID #0393) and Procter & Gamble (Document ID #0381) suggested that OSHA should clarify what the ''required list of hazardous chemicals'' refers to in the definition. This terminology has been in the HCS since the original standard was published in 1983, and refers to the only list of chemicals required by the HCS, which is in the written hazard communication program. Therefore, OSHA has modified the language in the final rule to read: ''among the list of hazardous chemicals required in the written hazard communication program, the label and the SDS.''

Another new concept in the NPRM for HCS labels is inclusion of a ''signal word'' to bring attention to the hazardous effects, as well as to contribute to the recognition of the severity of the hazard. Signal words have been used for many years in the United States on consumer and pesticide labels. The proposed definition is ''a word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The signal words used in this section are 'danger' and 'warning.' 'Danger' is used for the more severe hazards, while 'warning' is used for the less severe.'' OSHA received no objections to the proposed definition of ''signal word'' and it is being carried through to the final rule.

OSHA proposed to add a definition to the HCS for ''unclassified'' hazards. As has been noted, the current HCS is performance-oriented, and takes a very broad approach to defining hazards covered by the rule. The GHS is similarly broad in approach, but includes very specific definitions of criteria to apply when determining whether a chemical poses a physical or health hazard. This specification approach has significant benefits associated with it, including providing more guidance to help ensure a consistent approach to determining hazards. It also allows more information to be developed that provides an indication of the severity of effect.

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In the ANPR, OSHA asked for comment on whether the GHS criteria are sufficient to cover the hazards present in the workplace. While the Agency believed the scope of coverage is similar between the two approaches, OSHA wanted to be sure that the new approach is as comprehensive as the existing standard. In the NPRM (74 FR 50390, Sept. 30, 2009), OSHA noted two hazards of concern—combustible dust and simple asphyxiants. Both of these are mentioned in the GHS in the SDS annex as examples of hazards not classified that should be addressed on the SDS.

It is possible that there are other hazards that may not yet be specifically defined. Rulemaking participants have mentioned several (*e.g.,* static accumulators) (Document ID #0382 and 0402). The addition of the definition for unclassified hazards was intended to address these situations. Where a classifier has identified evidence of a hazard, but the evidence does not meet the currently specified criteria for hazards covered by the rule, the definition for unclassified hazards captures those effects to ensure that the final rule is appropriately protective, and covers all of the hazards covered by the current rule. During the negotiations for the GHS, U.S. industry representatives often raised the issue of ensuring that they could provide additional hazard information in order to satisfy product liability laws in the U.S. This was the rationale for allowing such information to be included on labels under supplementary information, and on SDSs under Section 2. OSHA believed that addition of the proposed definition of ''unclassified hazards,'' and specific recognition of the need to provide information when such effects arise, would help U.S. industry address its product liability concerns as well as protect exposed workers (74 FR 50390, Sept. 30, 2009).

OSHA proposed to require the chemicals posing unclassified hazards to be treated as hazardous chemicals under the rule. The Agency anticipated that this information would appear in Section 2 of the SDS (Hazard Identification)—the GHS already identifies this as the appropriate place in its guidance on the contents of SDSs (A4.3.2.3, *Other hazards which do not result in classification*), and proposed Appendix D included the requirement to list unclassified hazards. In terms of labeling, there are no specified label elements in the GHS for chemicals that pose unclassified hazards. OSHA proposed to require that the label for such hazards must name the chemical, and describe the hazardous effects

under supplementary information on the label, as well as provide any appropriate precautionary information. OSHA also expected that such hazards would be addressed in worker training programs.

It is important to understand that the Agency anticipated that there would be relatively few situations where there would be scientific evidence or data indicating an effect that is not currently classified, and merely wanted to ensure that this information is captured and conveyed to employers and employees. OSHA also indicated that it would be appropriate to establish a feedback mechanism, where classifiers could inform OSHA of situations where the current criteria are insufficient, and the Agency can then suggest to the United Nations that appropriate criteria be developed and added to the GHS. This is consistent with the overall approach to hazard classification in the GHS that OSHA proposed to adopt—that specific criteria be provided to help ensure that classification is appropriate, and information transmittal is consistent from company to company. Therefore, the use of the definition of unclassified hazard was to be a temporary situation for these hazards, ensuring information is provided until such time as the criteria are added to the rule.

There were many comments received regarding the NPRM definition and concept of ''unclassified hazards.'' A number of participants agreed with OSHA that there is a need to cover some hazardous effects that have not yet been spelled out in the GHS with criteria (Document ID #0313, 0327, 0347, 0363, 0365, 0366, 0367, 0410, and 0412). Others suggested that it was an appropriate interim step, while working with the UN to get criteria added to the GHS (Document ID #0329, 0330, 0335, 0339, 0352, 0370, 0376, 0383, 0405, and 0414). Some argued that these hazardous effects should have specific criteria so employers would know with certainty what is covered (Document ID #0327, 0361, 0366, 0377, and 0392).

With regard to the actual definition, some thought it was too broad and ambiguous (Document ID #0344, 0379, 0381, and 0399). The U.S. Chamber of Commerce (Document ID #0397) argued that the definition should be withdrawn, or substantially revised, and that OSHA was exceeding its authority. There were other commenters who thought the effects should be called ''hazards not otherwise classified'' or ''additional hazards'' rather than ''unclassified hazards.'' *See, e.g.,* Document ID #0328, 0344, 0363, 0370, 0376, 0393, and 0405. It was also suggested that the approach should only cover those hazards currently covered by the HCS (Document ID #0338).

OSHA has considered all of these comments, and the need to provide sufficient protection for exposed employees, in devising an approach for the final rule. First, OSHA agrees with commenters that using the term ''hazards not otherwise classified'' is a better designation. Secondly, OSHA has revised the language to clarify the intent and address what was perceived as ambiguity. The definition in the final rule, which replaces and amends the proposed definition of ''unclassified hazard,'' now reads: '''Hazard not otherwise classified (HNOC) means an adverse physical or health effect identified through evaluation of scientific evidence during the classification process that does not meet the specified criteria for the physical or health hazard classes addressed in this section. This does not extend coverage to adverse physical and health effects for which there is a hazard class addressed in this section, but the effect either falls below the cut-off value/concentration limit of the hazard class or is under a GHS hazard category that has not been adopted by OSHA *(e.g.,* acute toxicity Category 5).''

Additionally, and importantly, OSHA has deleted proposed paragraph (f)(2), which specified information to include on labels for the HNOC chemicals. Given that there are no harmonized label elements available for these effects, it appears that this could be confusing to both the label preparers and the users of the chemicals. However, provision of an SDS for HNOC chemicals is required under the final rule, and information regarding their hazards is to be included in Section 2.

The U.S. Chamber of Commerce objected to the inclusion of ''unclassified hazards'' in the final rule because, in its view, the proposed definition is ''broad,'' ''expansive,'' and will ''impose new requirements on employers without undertaking all of the steps in a full OSHA rulemaking'' (Document ID #0397). OSHA appreciates the concerns and has carefully considered (and in some respects revised) the provision with those concerns in mind. OSHA does not intend to impose new requirements, or to bypass rulemaking, but includes the definition to continue the longstanding requirements that such hazards be disclosed. As finalized and clarified, the relevant provision does not expand on those requirements or add new burdens; on the contrary, it preserves requirements in the current rule. The following discussion is designed to clarify these points.

As noted above, the final rule retains the proposed requirement, using the term ''hazard not otherwise classified'' (HNOC) instead of unclassified hazard. In essence, this definition requires classifiers who find ''scientific evidence'' that a chemical can cause death, illness, or injury to workers in a way not currently covered by the GHS classification criteria to disclose that fact on the SDS. This is meant to be a modest and narrow requirement. It is triggered only when the classifier has objective, scientific evidence of the hazard. OSHA believes that there are likely to be few such hazards outside those covered by the specific criteria in the final rule, which are the product of over thirty years of international experience in hazard communication.

It is important to understand that the HNOC definition essentially preserves (and does not expand) the scope of the current rule, which is not as tightly bound to specific criteria as the GHS. The HNOC definition should be interpreted and understood with this preservative goal in mind. For example, under the current rule, ''health hazard'' means a chemical for which there is at least one statistically significant scientific study showing that ''acute or chronic health effects may occur to exposed employees.'' Indeed, while mandatory Appendix A of the current standard lists criteria for specific health effects, it also notes that these criteria are not intended to be an exclusive categorization scheme, but rather any available scientific data on the chemical must be evaluated to determine whether the chemical presents a health hazard. Likewise, though the current definition of physical hazard is tied to a specific list of effects, some of these can also be quite broad. For example, under the current rule, ''flammable solid'' includes a material ''which can be ignited readily and when ignited burns so vigorously and persistently as to create serious hazard.''

The essential point is that the HNOC definition is designed so as to prevent the final rule from being less protective than the current standard by picking up any hazards that might fall within the definitions of the current rule, but might fall outside the GHS hazard classes. As discussed above, it is OSHA's intent that the HNOC classification would be an interim measure, used until harmonized criteria for a hazard can be adopted at the UN Sub-committee level, and subsequently incorporated into the HCS through rulemaking.

If the provision is understood in light of the foregoing points, this rulemaking is all the OSH Act and the Administrative Procedures Act (APA)

requires of OSHA before adopting the HNOC requirement. By preserving the requirements equivalent to those in the current rule, all the final rule does is to require chemical manufacturers and importers with reliable information that exposure to their chemical can cause illness, injury or death to an employee to disclose that fact on an SDS. OSHA has the authority to regulate hazard communication on a general level; indeed it must if it is to provide comprehensive worker protection in this area. *See National Ass'n of Manuf.* v. *OSHA,* 485 F.3d 1201, 1204 (D.C. Cir. 2007); *Associated Bldrs & Contrs. Inc.* v. *Brock,* 862 F.2d 63, 68 (3d Cir. 1988). Stakeholders have had a chance to comment on the HNOC requirement, and this rulemaking proceeding satisfies OSHA's statutory obligations.

With regard to the three hazards specifically mentioned during the rulemaking (pyrophoric gases, simply asphyxiants, and combustible dust), OSHA is handling them as follows in the final rule.

OSHA inadvertently removed the definition of pyrophoric gases from the proposal when it removed the generic definition for pyrophorics. The American Chemistry Council (ACC) correctly pointed out that excluding the pyrophoric gases, even though there is no corresponding definition in GHS, would mean that they would not be labeled or classified appropriately (Document ID #0393). OSHA agrees and has included the definition of pyrophoric gas in the current HCS in this final rule. Pyrophoric gases must therefore be addressed both on container labels and SDSs, and in worker training programs. Therefore, OSHA has retained the definition for pyrophoric gases from the current HCS and has added pyrophoric gases to the definition of ''hazardous chemical''. Label elements are provided in C.4.30. The signal word will be danger; the pictogram is the flame; and the hazard statement is ''Catches fire spontaneously if exposed to air.''

For the two examples of effects not addressed in the GHS that were raised in the proposal (simple asphyxiants and combustible dust), OSHA is addressing them specifically in the final rule rather than covering them under the HNOC definition. Using comments in the record, and commonly applied voluntary industry consensus standards, the Agency has designated chemicals with these properties under the definition of ''hazardous chemical.'' The chemicals posing such effects must therefore be both labeled where appropriate, and addressed on SDSs and in training. In addition, OSHA has added C.4.30 to Appendix C to provide the label elements for OSHA defined hazards.

With regard to simple asphyxiants, OSHA had indicated in Issue #8 (74 FR 50282, Sept. 30, 2009) that it believed it might be more appropriate to simply add a definition of this effect to the final rule rather than covering it under the ''unclassified hazard'' approach. A definition was proposed as follows:

> ''Simple asphyxiants'' are substances that displace oxygen in the ambient atmosphere, and can thus cause oxygen deprivation in exposed workers that leads to unconsciousness and death. They are of particular concern in confined spaces. Examples of asphyxiants include: nitrogen, helium, argon, propane, neon, carbon dioxide, and methane.

OSHA also solicited comments on proposed specific label elements. No symbol would be required, but the signal word ''warning'' would be used, with the hazard statement ''may be harmful if inhaled.'' In addition, a precautionary statement such as the following would be required: ''May displace oxygen in breathing air and lead to suffocation and death, particularly in confined spaces.''

A number of commenters agreed with the definition and the approach (Document ID #0339, 0347, 0351, 0365, 0366, 0370, 0405, 0408, and 0456). Others had specific comments on what was proposed, such as arguing for simplification of the language (Document ID #0414); proposing to replace the definition with the NFPA 704 definition of ''simple asphyxiant'' (Document ID #0330); suggesting a reference to ''suffocation'' (Document ID #0329 and 0335), or indicating that the hazard statement is really a precautionary measure, or vice versa (Document ID #0376, 0382, 0393, and 0405). Procter & Gamble suggested it should not be covered since it is not an inherent toxicity (Document ID #0381).

OSHA disagrees with Procter & Gamble's argument. Chemicals with certain properties can displace oxygen and cause asphyxiation. Not every chemical has those properties, so the asphyxiation hazard is inherent and chemical-dependent. Moreover, OSHA has provided longstanding interpretations that indicate simple asphyxiants are covered under the current HCS (*e.g.,* OSHA interpretation, March 4, 1993) and therefore industries working with these substances have provided labels and SDSs on simple asphyxiants in accordance with HCS requirements.

OSHA believes that coverage of simple asphyxiants is very important to the HCS. Such substances result in fatalities in the workplace, particularly in confined spaces, and need to be warned about effectively. The definition has been revised based on the comments received, and included in paragraph (c): '' 'Simple asphyxiant means a substance or mixture that displaces oxygen in the ambient atmosphere, and can thus cause oxygen deprivation in those who are exposed, leading to unconsciousness and death.'' Label elements are provided for simple asphyxiants in Appendix C.4.30. Simple asphyxiants will require the signal word ''warning'' and the hazard statement ''may displace oxygen and cause rapid suffocation.'' In addition, OSHA has added ''simple asphyxiant'' to the definition of ''hazardous chemical.'' Thus all of the provisions of the rule that apply to hazardous chemicals will apply to simple asphyxiants as well.

OSHA will continue to work with the UN to add this hazard to the GHS. (The U.S. has raised this issue in the UN Sub-committee, but it has not yet been resolved. Some of the Sub-committee members share the view that it should not be covered since, according to them, it is not an inherent hazard.) We will evaluate the need for additional rulemaking to change the definition and label elements if the UN incorporates simple asphyxiants into the GHS.

For combustible dust, OSHA has also already provided considerable guidance on the nature and definition of combustible dust in a variety of materials, including OSHA's *Hazard Communication Guidance for Combustible Dusts, OSHA* (3371–08 2009), and its Combustible Dust National Emphasis Program Directive CPL 03–00–008. As described in the preamble to the NPRM (74 FR 50395, Sept. 30, 2009), this was an issue that many ANPR commenters had provided information on, and is clearly a concern in the workplace. There have been a number of workplace incidents involving combustible dust, and the U.S. Chemical Safety and Health Investigation Board highlighted the need to address this specifically in the HCS (Document ID #0110):

> The CSB therefore recommends that OSHA amend the HCS to explicitly address the fire and explosion hazards of combustible dusts, and those materials that could reasonably be expected to produce combustible dusts, among the substances covered by the standard, and also that the Agency require inclusion of dust fires and explosions among the physical hazards that must be addressed in Material Safety Data Sheets. The CSB also requests that OSHA advocate similar changes to the GHS through appropriate international mechanisms.

OSHA has introduced this issue to the UN Sub-committee as well, and is leading a correspondence group on it. However, one of the problems in pursuing this approach is that some countries' systems are limited to supply chain requirements, and do not cover hazard communication issues that arise in the workplace as a result of processing. OSHA's rule does cover such workplace hazards, and requires the provision of information to downstream customers when known processing approaches will result in a hazard. Therefore, discussions continue, but the Sub-committee will not resolve this for at least two years.

In light of the important nature of the issue, a number of public comments, and the need to provide clarity sooner than the UN Sub-committee will complete its work, OSHA is including combustible dust in the definition of ''hazardous chemical'' in this final rule. We have noted that many commenters agreed that there was a need to provide hazard communication on combustible dust, as has been required by OSHA under the current rule. But there were also suggestions that criteria and greater clarity were needed in order to avoid confusion. A few commenters argued that OSHA should not cover combustible dust since it is not an intrinsic hazard of a product (*See, e.g.,* Document ID#0393). However, OSHA believes that similar to the situation with simple asphyxiants, all dusts in the workplace are not combustible, and processing of them does not always result in combustible atmospheres. Consistent with Executive Order 13563 and its emphasis on reducing uncertainty, OSHA agrees with commenters noted above that employers need certainty to properly cover it.

It is true that a separate rulemaking is ongoing on this topic in OSHA, and some commenters suggested that the combustible dust issue should therefore not be addressed in this rulemaking. Such an approach would, however, eliminate safeguards that have long been in place (since 1983). Similar to the situation with simple asphyxiants, OSHA has provided longstanding interpretations that indicate combustible dusts are covered under the current HCS (*e.g.,* OSHA interpretation, January 16, 1986). Specifically, under OSHA's existing Hazard Communication Standard, combustible dust is addressed under the broad definition as both a flammable solid and an explosive hazard. Therefore, not addressing combustible dust in this rulemaking would fail to meet the requirements—which are central to the existing standard—that chemical manufacturers and importers provide information on hazardous chemicals.

While OSHA is currently in the preliminary stages of developing a proposed rule to address combustible dust, the new standard is not expected to be completed for some time. It is also important to note that there is a clear distinction between coverage under the HCS, and potential provisions promulgated under a specific rulemaking for combustible dust. The rulemaking on combustible dust is a much broader approach to the issue, and will likely establish methods to control and address such dusts in the workplace. The HCS is an information transmittal standard. Provision of information to downstream employers is critical now, as it can alert them to the need to have a protective program. This is a fundamental purpose of the HCS—to provide employers and employees with information about hazards so they can take steps to protect their employees and themselves. A failure to continue to address the combustible dust issue in the HCS at this time would eliminate current protections. Therefore, the Agency is clarifying its position that it will continue to regard combustible dust as a serious hazard for which chemical manufacturers and importers must provide information to downstream employers.

The Agency is not adding a definition for combustible dust to the final rule given ongoing activities in the specific rulemaking, as well as in the UN Sub-committee. However, guidance is being provided through existing documents, including the Combustible Dust National Emphasis Program Directive CPL 03–00–008. This directive includes an operative definition, as well as provides information about current responsibilities in this area. In addition, there are a number of voluntary industry consensus standards (particularly those of the NFPA) that address combustible dust, and were noted by commenters as providing further guidance in this area. (*See, e.g.,* Document ID #0379 and 0530). Chemical manufacturers and importers must be aware of the hazards of their products, both in the shipped form, and under normal conditions of use or foreseeable emergencies in downstream workplaces, in order to comply with the HCS. Information about these hazards is required to be transmitted through labels and SDSs as specified in the standard. The protection of workers in downstream workplaces depends on the provision of accurate information to their employers.

Label elements are also provided for combustible dust in C.4.30 requiring, when appropriate, the signal word ''warning'' and the hazard statement ''May form combustible dust concentrations in air'' (similar to ANSI Z400.1/Z129.1—2010 statements).

Concerns were raised by commenters that labels with a signal word and hazard statement may not be appropriate in some situations, because the combustible dust is created through processing downstream, and the product may not present a hazard in its shipped form. (*See, e.g.,* Document ID #0050 and 0353.) Dow (Document ID #0353) pointed out: ''Over-warning would dilute the message.''

OSHA has already addressed a similar situation under paragraph (f)(4) of the final standard, which addresses solid metal, solid wood, plastic, and shipments of whole grain that present no hazard in shipping, but which are used in such a way in downstream operations that employees can be exposed to hazards. In this situation, the downstream employer needs label information about the hazards to protect employees, but OSHA determined that such label information does not need to accompany the product. Therefore, paragraph (f)(4) allows the chemical manufacturer or importer to transmit the label to the customer at the time of the initial shipment, but the label does not need to be included with subsequent shipments unless it changes. This provides the needed information to the downstream users on the potential hazards in the workplace, while acknowledging that the solid metal or other materials do not present the same hazards that are produced when these materials are processed under normal conditions of use.

Many products that are a combustible dust hazard when processed are similar in nature, and therefore paragraph (f)(4) would apply. A shipment of grain, for example, does not present a combustible dust hazard in the shipped form. But when processed downstream in a plant, such hazards are a concern, and the employer needs the label information to properly address the hazard in the workplace. Since this is a normal condition of use for the grain, the chemical manufacturer or importer must provide the information at the time of the initial shipment, and in the future if there is new information regarding the hazards or protective measures. An SDS must always be provided.

In other situations where the material is shipped in a dust form that is potentially combustible without further processing, the chemical manufacturer or importer must have appropriate labels on the containers when shipped under the requirements of paragraph (f)(1). If the chemical manufacturer

labels the product for combustible dust, the label must use the required labeling elements in C.4.30.

Combustible dust has been added to the definition for hazardous chemical, and thus all of the provisions of the standard as amended by the final rule that apply to hazardous chemicals will also apply to combustible dusts, including safety data sheets and worker training. Employers with workplaces where combustible dusts are generated must comply with the workplace labeling requirements in paragraph (f)(6).

As with simple asphyxiants, OSHA will continue to encourage the UN Sub-committee to deal with combustible dusts and develop criteria to be adopted by countries such as ours where workplace exposures are a key part of the hazard communication system.

(d) Hazard Classification

Hazard determination under the current standard. Under the current HCS, chemical manufacturers and importers are required to evaluate the scientific data available regarding each chemical they produce or import, and determine whether the chemical is hazardous within the meaning of the standard. This requires a thorough search of the scientific literature on both the health and physical hazards that the chemical may pose. The identified information must be evaluated within the parameters established in the standard to determine whether the chemical is considered to pose a hazard. Paragraph (d), Hazard determination, provides the regulatory approach for evaluation. This approach is to be implemented using the definitions provided in paragraph (c) as well as in Appendix A, which provides further elaboration on the nature and breadth of health hazards covered. Appendix B provides additional requirements for identifying and evaluating data regarding hazards. Both of these appendixes are mandatory.

In order to ensure the broadest dissemination of information, and to reduce the number of situations where conflicting determinations may be made for the same chemical by different suppliers, the current HCS considers one study, conducted according to established scientific principles and producing a statistically significant result consistent with the definitions of hazard in the standard, to be sufficient for a finding of health hazard under the rule. *See* 29 CFR 1910.1200(d)(2) and Appendix B. This approach was the broadest among those systems that were used as the basis for the development of the GHS.

Most of the definitions under the current HCS simply lead to a conclusion that the chemical involved poses that hazard or it does not. For example, a chemical might be found to be a carcinogen under the rule based on one study indicating that it poses a carcinogenic effect. The current standard does not generally address the degree of severity of the hazardous effect in most of the definitions—so a chemical is either a carcinogen, or it is not. However, while a one-study determination leads to providing information about that hazardous effect on a safety data sheet, it may not lead to a hazard warning on a label. The current HCS requires such warnings to be ''appropriate,'' and there are situations where the data do not support warning about the hazard on the label because of other negative studies or information. *See* 29 CFR 1910.1200 (f)(1)(ii). Thus, there is consideration of the weight of evidence when deciding what to include on a label. Chemical manufacturers and importers may also review the weight of evidence in preparing SDSs, and are permitted to discuss negative evidence and other constraints when reporting the information. Under the current standard, OSHA expects the hazard evaluation process to go beyond simply identifying one study, and include a complete evaluation of all of the information available when determining what information to transmit to users of the chemical.

This hazard evaluation process is consistent with product stewardship processes that have evolved in the chemical industry. (*See, e.g.,* the Responsible Care® program implemented by chemical manufacturers.) Under such processes, chemical manufacturers develop and maintain thorough knowledge of their chemicals. This knowledge is critical to the safe handling and use of the chemicals in their own facilities, as well as in their customers' facilities. It is also critical to handling product liability concerns for their materials.

The current HCS requires chemical manufacturers to remain vigilant regarding new information about their chemicals, and to add significant new information about hazards or protective measures to their hazard communication documents within three months of learning about them. *See* 29 CFR 1910.1200(f)(11), (g)(5). This has always been seen by OSHA as a more rigorous, but essential, requirement than some other countries' provisions, which only require these documents to be reviewed every few years. It should be noted that OSHA has not been enforcing the current requirement to change labels within three months of getting new information. This stay on enforcement began some years ago when the standard was first promulgated, and involved concerns about existing stockpiles of chemicals and other related information. The stay does not apply to safety data sheets. OSHA proposed to reinstate the requirement and lift the stay, making the updating period consistent with that required for safety data sheets (*See* the discussion below on labels).

At the time the HCS was promulgated, the standard's provisions and approach were quite novel, and there were concerns that chemical manufacturers and importers would need more guidance regarding what chemicals to consider hazardous. Thus OSHA included provisions in the hazard determination paragraph that established certain chemicals as being hazardous. Chemical manufacturers and importers still had to complete a hazard evaluation and determination of what hazards were posed, but for these designated chemicals, there was no decision to be made as to whether they were hazardous or not. These chemicals were considered to be a ''floor'' of chemicals covered by the rule, and included those for which OSHA has permissible exposure limits in 29 CFR Part 1910, as well as those for which the American Conference of Governmental Industrial Hygienists (ACGIH) has recommended Threshold Limit Values (TLVs). In addition, given that carcinogenicity was the most controversial and difficult health effect to address, OSHA indicated that, at a minimum, chemicals found to be carcinogenic in the National Toxicology Program's biennial Report on Carcinogens (RoC), or in monographs published by the International Agency for Research on Cancer, were to be considered to be carcinogens in addition to those regulated by OSHA as carcinogens.

The current HCS also includes provisions regarding hazard determinations for mixtures. 29 CFR 1910.1200(d)(5). Where such mixtures have been tested to determine their hazardous effects, the data on the mixture as a whole are used. Where testing has not been done, OSHA promulgated an approach based on the percentage of a hazardous chemical in a mixture to determine if the mixture is hazardous. Therefore, if a mixture contains one percent (by weight or volume) or more of a chemical determined to present a health hazard, the mixture is assumed to have the same effect. The one exception is

carcinogens—a mixture is considered to be carcinogenic if it contains 0.1% or more of a chemical found to be carcinogenic.

In all cases, a mixture will still be considered to be hazardous if there is evidence that it poses a health risk when the hazardous chemical is present in concentrations below the cut-offs. This was included to ensure that chemicals that can have effects at very low concentrations, such as sensitizers, will be adequately addressed.

For physical hazards, the evaluator must determine based on whatever objective evidence is available whether the hazardous effect is still possible in smaller concentrations. This recognizes that, for physical effects, such a determination may be made based on factors such as dilution, and there are readily available means to make an appropriate assessment.

The approach in the current HCS is considered to be a self-classification system. In other words, the chemical manufacturer or importer reviews the available information, and makes the determination as to whether the product presents a potential hazardous effect. This is different than some other systems where the regulatory authority makes the determination, and publishes a list of hazardous chemicals that must be used by the chemical manufacturer or importer.

The hazard determination is to be completed based on available information. The current HCS does not require testing of chemicals to produce information where it is not available.

The hazard determination approach in the current HCS recognizes that information about chemicals changes, new chemicals are introduced, others cease to be used—in other words, the world of chemicals in the workplace changes constantly, and the standard is designed to ensure that employees receive the most up-to-date information available regarding the chemicals to which they are currently being exposed.

Employers who simply use chemicals, rather than producing or importing them, are permitted to rely on the information received from their suppliers. 29 CFR 1910.1200(d)(1). This downstream flow of information recognizes that the chemical manufacturers and importers have access to information about the chemicals they sell that is not available to those who only use them. It also reduces duplication of effort by focusing the hazard determination process at the source, rather than having everyone who uses a chemical trying to complete such a process.

The current HCS requires chemical manufacturers and importers to maintain a copy of the procedures they follow to make hazard determinations. 29 CFR 1910.1200(d)(6). If OSHA finds errors in a label or SDS, the chemical manufacturer or importer that prepared the document will be held responsible—not the employer using the chemical.

The hazard determination procedures in the current HCS, including the definitions and Appendixes A and B, have been in place since the standard was promulgated in 1983.

Hazard classification under the GHS. The challenge in negotiating an international approach was to create a system that did not require frequent changes yet remained current and protective, incorporating the best parts of the approaches in the existing systems. The GHS embodies an approach that is very similar to the current HCS in scope and concept, but builds in additional details and parameters to help to ensure consistency worldwide. Like the HCS, the GHS approach is based on a downstream flow of information from suppliers to users; self-classification; use of available information with no new testing; and a broad approach to definitions of hazard. The GHS has further refined the approach to include addressing the degree of severity of the hazardous effects by assigning categories of hazard within hazard classes; providing detailed scientific approaches to evaluating the available data to help ensure that multiple evaluators produce similar results when classifying hazards; and allowing a broader use of available data by establishing principles where data can be extrapolated in situations regarding mixtures. OSHA believes that these additional provisions in the GHS enhance employee protection in addition to the benefits of having an internationally harmonized approach when preparing labels and SDSs.

To accommodate these refinements, and improve protection for employees exposed to chemicals in the U.S., the final rule modifies the current HCS as follows. First, paragraph (d) is re-named ''hazard classification'' rather than the current ''hazard determination.'' This re-naming is consistent with the approach and terminology used in the GHS.

Similarly, final paragraph (d)(1), like the proposal, modifies the current HCS to indicate that chemical manufacturers and importers are required to classify the chemicals' health and physical hazards in accordance with this section. For each chemical, the chemical manufacturer or importer must determine the hazard classes, and the category of each class, that apply to the chemical being classified.

Final paragraph (d)(1) allows employers to rely on information received from suppliers (*i.e.,* chemical manufacturers or importers). In the final rule, OSHA made two minor changes to the proposed text. Instead of saying that chemical manufacturers would be required to classify ''their'' physical and health hazards, OSHA has replaced ''their'' with ''the chemicals'' for clarification purposes. In addition, OSHA has added the phrase ''where appropriate'' to add clarity that not all hazard classes have more than one category. The final paragraph (d)(1) now reads as set forth in the regulatory text of this final rule.

Final paragraph (d)(2), which is identical to the proposal, similarly modifies the current HCS's terminology regarding classification. However, the final paragraph also includes modifications to address the evaluation process and the role of testing. The paragraph specifically states that evaluation of the hazards of chemicals requires the evaluator to ''identify and consider the full range of available scientific literature and other evidence concerning the potential hazards.'' This is consistent with the current HCS, but re-emphasizes the responsibility to fully characterize the hazard of the chemicals. To clarify that available evidence is to be used, final paragraph (d)(2) specifically states that there is no requirement to test a chemical to classify its hazards under the modified provisions—just as there is no such requirement under the current HCS. Dow Chemical Company (Document ID #0353) suggested that OSHA revert to the current text of paragraph (d)(2), which simply referred to Appendix B for the parameters of the hazard determination. This would not be appropriate since Appendix B no longer exists in its current form. But OSHA does not believe that what is written in paragraph (d)(2) is inconsistent with what is currently required in Appendix B. It is not intended to mean (and does not say) that an evaluator must identify every ''shred'' of information as Dow has indicated in its comment, but rather that the evaluator cannot, for example, only review acute toxicity data and consider that a complete evaluation. The extent of the literature search must be what the reasonably prudent classifier would do to assure themselves that evidence for the range of hazards covered by the rule has been identified, and a thorough evaluation has been done of the potential effects. That is

what is required today under the current HCS.

On the other hand, the Styrene Information and Research Center (SIRC) (Document ID #0361) commented on the same paragraph as follows:

> SIRC supports hazard classification for carcinogenicity and other endpoints based on a comprehensive assessment of the ''full range of available scientific literature and other evidence concerning the potential hazards,'' within a best available science framework. This approach should provide optimum precision assessing potential hazards and a sound basis for maintaining a safe and healthy workplace.

Final paragraph (d)(2) refers to Appendixes A and B for further information on classification as in the current standard. However, the Appendixes have been completely changed from the current text. New Appendix A includes the criteria for classification of health hazards, and new Appendix B includes the criteria for classification of physical hazards. These mandatory appendixes have to be used for the hazard classification process under the revised standard. The Appendixes have been adopted in the final rule, with some changes as described below.

Reference to these appendixes is also included in final paragraph (d)(3), which addresses mixtures. Final paragraph (d)(3)(i), like the proposal, states that chemical manufacturers and importers must follow the procedures in Appendixes A and B to classify hazards for mixtures as well as for individual chemicals. Proposed paragraph (d)(3)(ii) stated that the chemical manufacturer or importer ''shall be responsible for the accuracy of the classification even when relying on the classifications for individual ingredients received from the ingredient manufacturers or importers on the safety data sheets.'' SIRC expressed reservations about this proposed paragraph (Document ID #0494 Tr. 128–29; *See also* Document ID #0361). In commenting on this provision, SIRC said it was uncertain whether this provision meant that a classifier could rely on the classifications found in SDSs from the ingredient supplier, or whether the classifier was required to ensure that the supplier's classification was correct. It was OSHA's intent in the proposal to clarify that generally classifiers may rely on the classifications found on the SDSs received from suppliers. The final rule revises (d)(3)(ii) to state that when chemical manufacturers and importers are classifying mixtures, they may rely on the information provided on current safety data sheets of the individual ingredients, except where the chemical manufacturer or importer knows, or in the exercise of reasonable diligence should know, that the safety data sheet misstates or omits required information.

In reconsidering the language proposed, OSHA wanted to ensure that chemical manufacturers and importers know that, in most cases, they can continue to rely on their suppliers' SDS information for ingredients they will be using in formulations. However, where they know information is incomplete or wrong, they have some responsibility for ensuring they have the correct information before using it for their own evaluations.

During implementation of the current HCS, OSHA allowed formulators of chemicals to develop an SDS by simply providing the SDSs for all the ingredients rather than compiling a specific SDS for the product. OSHA does not believe that this practice of providing the SDSs for all the ingredients is widely pursued, but it will not be permitted under the final rule. The revisions to the approach to classifying mixtures do not lend themselves to such a practice. Hazard classification requires consideration and application of bridging principles based on the constituents, as well as the application of a formula when there are multiple ingredients with acute toxicity. These approaches require the evaluator to determine a classification for the mixture as a whole. In addition, this practice places more of a burden on the user of the product to sort out the relevant information for protection of their employees. The formulator is in a better position to assess the information and provide what is needed to their customers.

Under the current HCS, paragraph (d)(6) requires chemical manufacturers, importers, or employers performing hazard determinations to keep a copy of the procedures they follow in the hazard determination process. This provision has been deleted in the final rule because the hazard classification procedures have been specified, and thus all evaluators are following the same process.

Final paragraph (d) is thus much shorter and less detailed than paragraph (d) in the existing standard. This is largely due to the approach in the GHS to include the details regarding classification in hazard-specific discussions that address both the individual substance and that substance in mixtures. Given the volume of these criteria, it appeared to OSHA that presenting the relevant information in mandatory appendixes was a more efficient way to describe the criteria than including it all in the primary text of the standard. This is particularly true for those many employers reading the standard who do not have to perform hazard classification—the revisions only apply to chemical manufacturers and importers, unless an employer chooses not to rely on information received from them.

The GHS criteria. A number of commenters expressed their general support for the GHS criteria, and agreed that the criteria will result in thorough, harmonized hazard evaluations (*See, e.g.,* Document ID #0329, 0330, 0335, 0339, 0370, 0375, and 0389). In adopting the GHS approach, the final rule deletes from the hazard classification requirements the ''floor'' of hazardous chemicals described above—established lists of chemicals that are considered hazardous under the HCS in all situations. In addition, OSHA deleted the across-the-board ''one study'' rule described above, wherein one good scientific study established that a substance is a hazard. However, the one-study approach is still included in some of the criteria in the GHS, and thus in the revised OSHA rule.

With the detailed criteria, and the weight of evidence approach in the GHS, OSHA indicated in the NPRM that it appeared to no longer be necessary to have such a floor or the one study rule. Many commenters agreed with OSHA (*See, e.g.,* Document ID #0313, 0327, 0328, 0336, 0338, 0339, 0344, 0351, 0361, 0363, 0365, 0367, 0370, 0371, 0375, 0376, 0377, 0379, 0381, 0382, 0383, 0393, 0399, 0405, 0408, and 0410). For example, the Alliance of Hazardous Materials Professionals (Document ID #0327) indicated:

> Elimination of the ''floor'' definition of hazardous (as consistent with the GHS) would require producers and users to more closely examine the properties of the materials they produce or handle. While this would increase the effort necessary to determine that some substances are hazardous, it would also force a more careful examination of the underlying reasons that the substance is hazardous.

There were few comments that questioned taking the floor out of the requirements given the detailed nature of the criteria to evaluate hazards. It was noted that the lack of a floor may result in some inconsistencies in evaluations (Document ID #0352). There were also some concerns about removing IARC and NTP as sources to evaluate chemicals (Document ID #0321). Conversely, others supported elimination of these resources because inclusion violated the Data Quality Act (Document ID #0417)—a conclusion that OSHA does not believe is accurate. Evaluation of carcinogens will be

addressed further below. OSHA has not included a ''floor'' of hazardous chemicals in the final standard.

As OSHA indicated in the proposed rule (74 FR 50282, Sept. 30, 2009), the Agency planned to adopt all of the health and physical hazard classes in the GHS, but not all of the hazard categories. In keeping with its intent to maintain the scope of coverage of the existing rule to the extent possible, as well as to be as consistent as possible with the scope of the European implementation of the GHS, OSHA did not propose to adopt Acute Toxicity, Category 5; Skin Corrosion/Irritation, Category 3; and Aspiration Hazard, Category 2.

Many commenters agreed that the categories selected in the proposal were appropriate (*See, e.g.,* Document ID #0313, 0327, 0329, 0330, 0338, 0344, 0351, 0353, 0365, 0367, 0370, 0376, 0377, 0379, 0381, 0382, 0383, 0393, 0399, 0402, 0408, and 0410), although there were some who thought all hazard categories should be adopted to be completely consistent with the GHS (*See, e.g.,* Document ID #0328, 0335, 0336, and 0339). There were other comments that supported streamlining the document by omitting the guidance portions of the GHS (Document ID #0328, 0399, and 0408); stated that the goal should be harmonization with trading partners, so if they exclude categories, OSHA should exclude them too (Document ID #0335 and 0389); or indicated that OSHA should accept labels and SDSs that include the excluded hazard categories (Document ID #0328, 0379, and 0405). OSHA indicated in the NPRM (74 FR 50383, Sept. 30, 2009) that additional information could be included on labels and SDSs in any event, and that is the position in the final rule as well. *(See* (g)(2); Appendix C.3.)

While the decision logics for the health and physical hazard criteria were omitted from the regulatory text, OSHA indicated that it would consider publishing them as guidance. Commenters agreed with this concept (*See, e.g.,* Document ID #0344, 0351, 0370, 0381, 0410, and 0453). It was further suggested that the diagrams be made simple so all workers can understand them (Document ID #0336). The decision logics are already part of the GHS, and are graphic representations of the process of determining each type of hazard. As such, they are tools for preparers of labels and SDSs, rather than for exposed workers. Another comment was that public comment should be sought on the decision logics before publishing them (Document ID #0379). Given that they are already part of the agreed text of the GHS, and are guidance, OSHA will make them readily available on the Agency's Web page.

There were also comments that OSHA should publish guidance on its interpretation of criteria application, and indicate whether it agrees or disagrees with interpretations published by other countries (Document ID #0382). OSHA is considering many different types of guidance documents, but has not made final decisions in this regard.

Background on Appendices A and B

The text of Appendixes A and B is the bulk of what was proposed to be adopted essentially verbatim from the GHS. While some of the provisions of the GHS have been adopted into the final rule with OSHA-developed language that is specific to the regulatory system of the U.S., OSHA has strived in these appendixes to retain the text of the GHS intact. In order to understand the context of this language, and OSHA's approach to its inclusion, a brief history of its development is necessary.

Most people think of the labels and SDSs as the products of the GHS that are harmonized since they are the system's ''output'' that are seen most frequently. But harmonization of these documents cannot occur unless the underlying criteria are harmonized, and countries adopting them implement them similarly. The health hazard criteria were developed in the Organization for Economic Cooperation and Development (OECD)—an organization of 34 countries that ''provides a forum in which governments can work together to share experiences and seek solutions to common problems.'' *See www.oecd.org.* One of the areas in which the OECD has long been actively involved is chemicals. As such, the OECD provides a forum for countries' experts to discuss and resolve issues of mutual concern. In addition, the OECD works with business, through the Business and Industry Advisory Committee, and with labor, through the Trade Union Advisory Committee. Perhaps its most visible contribution in the area of chemicals is test guidelines to assess the hazards of chemicals. These test guidelines address many different health effects; are considered to be scientifically robust, validated test methods; and are widely used around the world.

It was this expertise and recognition that led to the OECD being the ''focal point'' for development of the health hazard criteria. The OECD also uses a process of consensus to develop their documents, requiring agreement from all countries to move forward rather than a simple majority vote. Working on a consensus basis is much more difficult to accomplish, but is advantageous in other ways since it helps to ensure that the concerns of all parties are taken into consideration, and thus are more likely to remain consistent with the results.

A disadvantage is that the text must satisfy all parties, and thus it is not always written in the clearest fashion. The text was also reviewed further when it was submitted to the UN Sub-committee, and additional editing was done to address concerns. Therefore, it is fair to say that it was written by expert committees, and reflects the involvement of many different people and ideas.

The criteria in Appendix B, unlike those in Appendix A, were not developed ''from scratch,'' but were based on the harmonized criteria developed to classify the physical hazards of chemicals involved in transport by the UN Sub-committee of Experts on the Transport of Dangerous Goods (TDG). The TDG Sub-committee includes many subject experts in areas such as explosives and flammability. The TDG Sub-committee and the International Labor Organization (ILO) were jointly tasked to review the TDG criteria for application to other sectors such as the workplace. This review not only took advantage of the UN and ILO expertise, but also created a system that is harmonized with transport in terms of criteria.

When OSHA developed the proposed rule, it considered editing the text of the criteria for purposes of improving the language. However, the trade-off is inconsistency with the GHS, and the potential for people to believe that OSHA means something different because the text has been revised. Thus, as noted in the NPRM (74 FR 50392, Sept. 30, 2009), OSHA chose to take the approach of adopting the language as stated in the GHS. Editing of the criteria focused on what needed to be changed for purposes of putting it into mandatory regulatory language, including deleting what was clearly identified as guidance.

Therefore, while we have reviewed every suggestion that was made to the text of the Appendixes, our general approach was not to make changes unless they were truly necessary. Editorial changes for purposes of clarification are more appropriately made through the UN Sub-committee process, and OSHA participates actively in that activity, and chairs the primary correspondence group. Those changes that were suggested that OSHA believes have merit in terms of clarifying

provisions will be worked through this correspondence group so the UN Sub-committee can make the changes. Then OSHA will adopt them into the revised standard through rulemaking processes discussed elsewhere in this preamble. To avoid giving this same response repeatedly, OSHA will not be individually addressing the many suggestions for clarifications in this preamble.

In general, there were very few substantive technical comments provided on the approaches in the criteria, and OSHA assumes that reflects the fact that the criteria were developed by technical experts from countries and stakeholder organizations. There were some suggestions received that certain parts of Appendix A be withdrawn so OSHA can consult with toxicologists (Document ID #0353). Numerous toxicologists and other health professionals from the U.S., as well as many other countries, have been involved in the development and review of the text in Appendix A, and it has been subject to extensive scientific and policy discourse. Furthermore, this rulemaking was also the opportunity for others who have not been involved to provide input. If OSHA had received significant comments on the technical aspects of the criteria that indicated a systemic concern about the criteria, it may have been cause for reconsideration. But most of the comments that were received were more reflective of differences on policy positions than truly technical issues. Therefore, there are relatively few changes to Appendixes A and B as a result of record input. These changes are discussed below.

As described in the NPRM and this document, in Appendixes A and B OSHA has maintained its general approach (supported by stakeholders) of: (a) Limiting changes to the HCS to those that are required to align with the GHS; and (b) remaining as consistent with the GHS as possible within the need to use appropriate regulatory language and maintain or enhance current protections. OSHA has also remained mindful of the approaches of its trading partners, although it notes that some proponents of that principle were quite inconsistent themselves when using this particular argument. Therefore, while this argument was used to support choosing higher cut-offs for mixtures, for example, some of these same commenters also suggested not covering hazard classes or categories that are both covered by the EU and currently addressed by OSHA (*See, e.g.,* Document ID #0344, 0381, and 0393). These comments are addressed below.

Appendix A, Health Hazards. Proposed Appendix A began with an introduction that includes material related to principles of classification taken from Chapter 1 of the GHS. These address both weight of the evidence, and the approach to mixtures. In A.0.3.2, the proposed text referred to both positive and negative results being ''assembled together.'' Dow (Document ID #0353) expressed concern about the implications of the word ''assembled.'' In the final rule, OSHA has revised this language throughout the chapter to say ''shall be considered together.'' Dow also commented that in the discussion regarding acceptable data in A.0.2.2 and A.0.2.3, the text should refer to ''valid'' methods, rather than ''validated.'' OSHA does not agree that this change is warranted. To be ''valid'' data, the methods used to produce the data must be validated. In order to clarify the discussion, OSHA has revised the text by adding two sentences from the GHS to A.0.2.3 as follows:

> Any test that determines hazardous properties, which is conducted according to recognized scientific principles, can be used for purposes of a hazard determination for health hazards. Test conditions need to be standardized so that the results are reproducible with a given substance, and the standardized test yields 'valid' data for defining the hazard class of concern.

As mentioned below in the discussion on mixtures, OSHA has also revised Appendix A to use ''cut-offs/concentration limits'' everywhere one of these terms was formerly used in order to be consistent, and make clear the terms are interchangeable.

The remainder of Appendix A is taken from Chapter 3 of the GHS on Health Hazards. OSHA has included the specific discussions of all of the health hazards covered by the HCS in proposed Appendix A, extracted from Chapter 3 of the GHS. OSHA removed the decision logics that are in the GHS from the criteria, and is considering including them in a guidance document to be made available at the time the final rule is published. As discussed above, stakeholders generally supported this approach. The hazard communication portions of the criteria chapters have also been removed since all of this information is already available in Appendix C and would thus be duplicative. In addition, edits have been made where OSHA is not adopting all of the categories of a particular hazard class.

The chapters on Skin Corrosion/Irritation (Chapter A.2) and Serious Eye Damage/Irritation (Chapter A.3) have been modified more extensively than the other chapters on health hazards in the GHS. In these chapters, the GHS leads the evaluator to conduct additional testing on the chemical when information is not available. While the GHS does not require such testing, the criteria for these effects imply that it should be conducted to complete an evaluation. The HCS is based solely on available information, and no testing is ever required. Therefore, OSHA has modified these chapters to eliminate any references to additional testing and limit the evaluation to what is known based on available information. It should be noted that the UNSCEGHS has initiated work to edit these chapters and make them easier to follow. OSHA will continue to participate in this activity.

Coverage of Mixtures

The coverage of mixtures in terms of health hazards is addressed in two places in the revised rule. First, general principles that apply to multiple effects are addressed in the introductory part of Appendix A in Chapter A.0, ''General Classification Considerations.'' Second, each hazard class discussion includes the criteria for classifying a substance or a mixture. Unlike the current HCS, which defines across-the-board percentage cut-offs for all health hazard classes, the GHS employs a tiered approach to classification. Like the HCS, classification would be based on test data for a mixture as a whole for most hazard classes where it is available. However, where it is not available, but there are data on ingredients and similar mixtures, the GHS allows extrapolation or bridging of data to classify a mixture. This allows greater use of available data before resorting to a percentage cut-off or similar approach. Where such data are not available, the criteria address how to classify mixtures based on cut-offs specific to that hazard. In the case of acute toxicity, this includes calculations based on the acute toxicity of each ingredient in the mixture.

The tiered scheme is somewhat different for certain hazard classes. As described, usually the evaluation is based first on test data available on the complete mixture, followed by the applicable bridging principles and, lastly, cut-offs/concentration limits or additivity. The criteria for Germ Cell Mutagenicity, Carcinogenicity, and Reproductive Toxicity take a different approach by considering the cut-off levels as the primary tier and allowing the classification to be modified on a case-by-case basis based on available test data for the mixture as a whole. This approach is related to the sensitivity of available test methods to detect these types of effects at small

concentrations in the mixture as a whole.

The approach to mixture classification may result in some mixtures that are currently considered to pose a particular hazard not being so classified under the GHS. OSHA believes that the protections of the GHS approach are appropriate, and that these changes will not result in an inappropriate reduction in protection. For example, if there is a mixture that is comprised of 1% of an acutely toxic material, regardless of the severity of that effect, and 99% water, the current HCS would require that mixture to be considered acutely toxic. Under the GHS, it is unlikely to be considered as such. Based on the dilution effect of the water, the acute toxicity is no longer a concern. Thus the bridging principles under the GHS allow for a more accurate assessment of the potential harm of the mixture, whereas the strict cut-off approach under the current HCS may provide hazard information in cases where the exposure is minimal and the occurrence of an adverse effect is unlikely. In the example described, the presence of the water in the mixture as used by the workers reduces the potential for exposure to the hazardous ingredient to such a small amount that no effect is expected to result. The GHS approach is not as simple to apply as the current HCS, but the resulting approximation of the hazards of the mixture will be more accurate.

The GHS uses both the term ''cut-off'' (which is what is used in the current HCS), and ''concentration limit'' (which is used in the EU requirements). The terms are used interchangeably and often appear together (*i.e.,* cut-offs/concentration limits). Several commenters indicated that OSHA should define these terms (Document ID #0344, 0381, and 0393). There are no definitions in the GHS since the terms are self-evident when viewed in the context of how they are used. OSHA does not believe that definitions are needed for these terms. However, Appendix A has been reviewed to make sure the terms are both used consistently throughout the Appendix. The GHS was also reviewed, and it appears the terms are not necessarily used consistently in that text.

Several commenters indicated that language in A.0.5.1.1(a), in the bridging principle that addresses dilution, was inappropriately changed from ''may'' to ''shall'' in the NPRM (*See, e.g.,* Document ID #0344, 0381, 0382, and 0393). OSHA changed the language to track the mandatory nature of the provision when present in a standard versus a non-mandatory recommendation such as the GHS. Therefore, the language remains as ''shall'' in the final rule.

In another part of the bridging principles, the term ''commercial product'' is used in the GHS, and was thus used by OSHA in the NPRM (A.0.5.1.2). Commenters asked that this term be defined (Document ID #0344 and 0381). OSHA reviewed the text, and has changed the term to ''mixture'' instead of ''commercial product''. This is accurate, and the term is already defined.

There are several hazard classes in the GHS that give competent authorities such as OSHA a choice of cut-offs/concentration limits to apply when classifying a mixture containing ingredients that pose these effects (*e.g.,* reproductive toxicity, sensitization, target organ effects). The reason the GHS includes a choice of cut-offs to trigger label disclosure is that countries involved in the negotiations on mixtures had different views on the issue that could not be resolved. All countries agreed to use the lower of the two cut-offs for SDSs, so information will be provided consistently for those documents in all cases. But for labels, some countries had what were described as ''downstream consequences'' that were linked to label disclosures, and therefore did not want to adopt the lower level and trigger those consequences (*e.g.,* banning the use of the chemical for consumer products).

In North America, Canada and the U.S. do not have such consequences linked to label statements, and their requirements are based on giving workers the right-to-know about the hazards and identities of the chemicals in their workplaces. Additionally, Canada has the lower cut-offs in most cases in their current requirements, and OSHA already has the 0.1% cut-off for carcinogenicity. Adoption of the lower cut-offs for both labels and SDSs was supported by both Canada and the U.S. from the outset.

As has been described, OSHA has used consistent cut-offs for purposes of hazard determination for mixtures since the HCS was promulgated in 1983. OSHA described the proposal as follows in the 1983 final rule preamble (48 FR 53290, Nov. 25, 1983):

> The rationale of the proposal was that when the hazard of a mixture is unknown, all hazardous ingredients should be indicated on the material safety data sheet. The user would then have the most complete information available to predict the potential hazards of the mixture. The one percent exclusion was included to absolve the employer from having to evaluate and list chemicals in small quantities, which are not likely to result in substantial exposures.

In the 1982 proposal, the one percent cut-off would have applied to all health and physical hazards. As a result of the comments submitted to the record, OSHA took a different approach to physical hazards in the final rule (no percentage cut-off applies to physical hazards), and also lowered the cut-off for carcinogenicity to 0.1 percent. In addition, a provision that required inclusion of chemicals below these cut-offs in certain situations was also part of the 1983 final rule.

In proposing the one percent cut-off, OSHA noted that ''there was no scientifically correct delineation, but that the one percent cut-off is apparently considered reasonable by a number of parties'' (47 FR 12102, Mar. 19, 1982). OSHA's intent was ''to absolve the employer from having to evaluate and list chemicals present in mixtures in small quantities, which are not likely to result in substantial exposures'' (48 FR 53290, Nov. 25, 1983). These cut-offs were practical accommodations, had been used in other regulatory settings (*See, e.g.,* 29 CFR 1910.1003(a)(2), 13 Carcinogens), and in the 1983 final rule were accompanied by a provision that also covered those situations where the cut-offs were too high for protection purposes. Science regarding potential health hazards in the workplace does not provide evidence that would allow the Agency to draw a bright line to indicate specific concentrations of a chemical in a mixture are, or are not, a potential hazard to workers. Therefore, the establishment of such cut-off levels is a policy decision based on scientific considerations, as well as concerns regarding practicality and utility, but not on studies that can be linked to a particular level for each type of health effect.

That being said, however, the scientific knowledge about these health effects has increased significantly since the HCS was first adopted, as has the concern about their occurrence in the work force. At that time, carcinogenicity was the primary concern in terms of chronic and/or significant health effects, and this concern was reflected in the lower cut-off value adopted by OSHA for that effect. Most of OSHA's substance-specific rulemakings were done for the purpose of addressing carcinogenicity. Now, however, there is more evidence that raises significant concerns about other types of effects.

Sensitization is a key example. Respiratory sensitization leads to asthma, and substantial evidence has

developed over the last few decades showing this effect is of increasing concern. For example, a study by Frazier *et al.* (2001, Document ID #0587) notes that the incidence of occupational asthma has increased by 50% over the last two decades, and that population-based surveys have reported that 5% to 21% of asthma cases are caused or exacerbated by occupational exposure. The authors extrapolated this to the estimated 12 million adults who have asthma in the U.S., and concluded that this suggested that between 500,000 and 2.5 million Americans had occupational asthma. This study was published in 2001, and the numbers are likely to be larger today. The study also examined SDSs for chemicals containing toluene diisocyanate, a known respiratory sensitizer, and found only half the SDSs noted asthma as a potential health effect, and one in four noted neither asthma nor respiratory sensitization effects. Other studies have also examined the increasing concerns about occupational asthma (Document ID #0588, 0591, 0592, and 0593).

Further, the most recent science shows that respiratory and skin sensitization can be caused at very low concentrations. A 2006 paper by Arts *et al.* summarizes human and animal studies on skin and respiratory sensitizers, and finds that sensitization effects often result from exposures to chemicals at concentrations below 1% in studied populations (Document ID #0593). Likewise, the World Health Organization's report, ''Skin Sensitization in Chemical Risk Assessment,'' also reports positive results for skin sensitization well below the 1% cut-off used by the current HCS (Document ID #0586). Moreover, once an individual is sensitized, a response can be triggered at even lower levels than those required initially to induce sensitization (Document ID #0585 and 0593). OSHA has often used sensitizers as an example of why SDS preparers need to consider whether information should be provided below the 1% cut-off. For example, in OSHA's compliance directive for the HCS (CPL 02–02–038), the following guidance is given:

> If the components of a mixture could be released in concentrations which would exceed an OSHA PEL, an ACGIH TLV, or could present a health risk to employees, information on these components must be included on the MSDS regardless if their final concentration in the mixture is less than 1% (or 0.1% for carcinogens). For instance, TDI is a sensitizer at very small concentrations and despite its low concentration in a mixture, can be offgassed in quantities which may present a health risk that must be noted on the MSDS.

But sensitization is not the only effect of concern. Reproductive toxicity is a serious hazard that includes both fertility and effects on the offspring. Recent research concerning endocrine disruptors suggests that these chemicals can have adverse reproductive effects at very low levels (Document ID #0583, 0584, and 626). Likewise, occupational disease mortality and morbidity statistics indicate a number of cases related to target organ effects as well (Document ID #0291, *e.g.,* heart disease and renal effects).

OSHA proposed to use the most protective of the GHS concentration limits for these hazard classes. For sensitizers and reproductive toxins, the final rule requires information to be provided on labels and safety data sheets at concentrations above 0.1%. Other countries may choose to only provide the information on SDSs when the concentration is higher. However, as indicated, these particular health effects are among the most significant to employees, and OSHA believes the provision of information on labels will help both employers and employees ensure that appropriate protective measures are followed. (On the other hand, it should be noted that OSHA was persuaded that the current 1% cut-off may be too conservative for many acute toxins and Category 3 Single Target Organ Toxicants, and the final rule is likely to result in fewer mixtures being covered for these effects than under the current approach.)

In addition to concerns regarding protection for these health effects, there is also a concern about the communication difficulties of having different hazard information on a label versus a safety data sheet. As indicated, the GHS negotiators agreed that all countries would use the lower levels in the criteria for providing information on SDSs. Using a different cut-off for labels would create a situation where there may be hazards on the SDS that do not appear on a label. This inconsistency makes training more difficult, and creates confusion for downstream employers as well when they are deciding about appropriate protective measures. Under the current rule, the mixture cut-offs apply to both the label and the SDS. Several commenters indicated that OSHA should provide guidance indicating specific threshold cut-offs (Document ID #0344, 0381, and 0399). The table below indicates what the cut-offs are for different health hazards. These commenters also suggested OSHA provide guidance on opting out of the cut-offs if data override the threshold. This is already addressed in A.0.4.3.2 (if the classifier has information that the hazard of an ingredient will be evident (*i.e.,* it presents a health risk) below the specified cut-off/concentration limit, the mixture containing that ingredient shall be classified accordingly). A.0.4.3.3 also allows the cut-off/concentration limit to be higher in exceptional cases. The evaluator must have conclusive data demonstrating that the hazard of an ingredient will not present a health risk. OSHA anticipates that the criteria of A.0.4.3.3 would rarely permit this approach to be used.

TABLE XIII–1

Hazard class	Label cut-offs	SDS cut-offs
Respiratory/Skin sensitization	≥0.1%	≥0.1%
Germ cell mutagenicity (Category 1)	≥0.1%	≥0.1%
Germ cell mutagenicity (Category 2)	≥1.0%	≥1.0%
Carcinogenicity	≥0.1%	≥0.1%
Reproductive toxicity	≥0.1%	≥0.1%
Specific target organ toxicity (single exposure)	≥1.0%	≥1.0%
Specific target organ toxicity (repeated exposure)	≥1.0%	≥1.0%
Specific target organ toxicity Category 3	>20%	>20%

During the hearing, worker representatives were asked to comment on whether consistency between the information on the label and the SDS was important for worker protection. They all indicated that it was important. For example, Mr. Platner, who represented the Building and Construction Trades Department of the

AFL–CIO stated (Document ID #0494 Tr. 25):

> Oh, absolutely. An example of a sensitizer that's very common is isocyanate components or polyurethane spray foams or coatings. They're potent sensitizers, and that information very rarely gets to the label. It's usually appropriately in the MSDS, but it rarely makes it to the label.

Similarly, Mr. Kojola of the AFL–CIO, commented (Document ID #0494 Tr. 33):

> Oh, absolutely. What it does is it provides a consistent message that workers are getting both in labels and on safety data sheets. And I think it enhanced the ability to, for example, translate that information into other languages, so I think that alone is a major step forward in enhancing worker protection.

Some commenters argued that OSHA should adopt the higher cut-off levels where given a choice by the GHS (Document ID #0344, 0361, 0367, 0371, 0376, 0381, 0392, and 0393). They questioned whether there was a scientific justification for the lower levels, and suggested that the U.S. should harmonize with the EU approach.

As OSHA described above, there are two primary reasons for the lower levels. First, OSHA believes it is important for effective communication to have the same hazards on the label and SDS to as great a degree as possible. Labels are in an employee's work area, and thus provide the most immediate source of information. While SDSs must be available, they are longer and more complicated, and workers are less likely to review them on a regular basis. For downstream employers, it is also important to maintain consistency and reduce confusion where possible by having the information on hazards the same on the label and SDS.

Secondly, as discussed above, increased knowledge of these health effects in the scientific literature, as well as studies indicating that they are often not reported when they should be, or the information is lacking, has led OSHA to the conclusion that communication at the lower levels is appropriate and necessary for worker protection. It is particularly critical in the area of sensitizers since the incidence of occupational asthma is increasing, and sensitization can occur at lower levels as it progresses. But with the advent of information on effects like those of endocrine disruptors, and the increased awareness of the possible effects of low levels of exposure, it is necessary for all of these effects.

As for the argument regarding consistency with the EU, OSHA has sought to be consistent where possible. However, the EU has a different regulatory structure for dealing with these effects downstream, and what is appropriate for their classification and labeling system is not necessarily appropriate for ours in the U.S. (*See, e.g., http://ec.europa.eu/environment/chemicals/dansub/pdfs/30_atp.pdf:* ''Under Directive 76/769/EEC on the restrictions of certain dangerous substances and preparations, the Commission is, in principle, obliged (within six months of the publication of the classification) to propose a ban on their placing on the market and use by consumers as substances or in preparations (above specified concentrations).'')

There are relatively few chemicals for which there are data indicating the types of effects of concern with regard to these lower cut-offs (*e.g.,* sensitizers), and fewer still that would fall into the range between the lower and higher cut-offs (*e.g.,* between 0.1% and 0.3% for reproductive toxicity). Furthermore, as suggested in one comment, disclosing at different levels on labels versus SDSs may actually create a product liability issue under U.S. law that would argue against taking such an approach (Document ID # 0353). While product liability is not one of the issues that influenced OSHA's decision-making, it may be important to these commenters in the future.

The American Chemistry Council asked during the hearing why OSHA adopted the cut-off levels 25 years ago if the Agency thought they weren't protective, or whether there is information to indicate that they have not been protective (Document ID # 0494 Tr. 174). In response to questions from OSHA as to what the scientific basis would be for communicating a hazard on an SDS and not a label, they responded (Document ID # 0494 Tr. 177): ''A scientific basis? Well, most of these are obligatory regulatory cut-offs for mixtures. There really is not much scientific basis for any of the mixture cut-offs.'' In other words, ACC concedes that there is also no scientific basis for the higher cut-offs it advocates—rather the EU cut-offs are simply policy choices made by a different authority with a distinct regulatory structure. As described previously, OSHA believes there is evidence that these cut-offs are no longer sufficiently protective in light of additional information developed since the HCS was adopted in 1983. Furthermore, having inconsistencies in information on a label versus a safety data sheet impacts the effectiveness of the communication to workers and downstream employers. The cut-offs/concentration levels in the final rule are the same as proposed, and are the lower levels of those the GHS allows countries to choose from when implementing.

The Styrene Information and Research Center (SIRC) argues that OSHA may not lower the mixture cut-off thresholds for sensitizers and reproductive toxicants without establishing that a significant risk exists at that lower threshold (Document ID #0361, 0467, and 0642). OSHA disagrees.

As discussed in Section V, Pertinent Legal Authority, OSHA has found that inadequate hazard communication creates a significant risk and that the final rule will reduce that risk. Contrary to what the SIRC says, OSHA need not support each requirement in a standard with its own significant risk finding. *Public Citizen Health Research Group* v. *Tyson,* 796 F.2d 1479, 1502 n. 16 (D.C. Cir. 1986). Indeed, when the Supreme Court first construed the OSH Act as imposing a significant risk requirement, it spoke in terms of the Agency making findings about unsafe *workplaces,* not individual hazards. *Benzene,* 448 U.S. at 642 (''before promulgating any standard, the Secretary must make a finding that the workplaces in question are not safe [and] * * * a workplace can hardly be considered 'unsafe' unless it threatens the workers with a significant risk of harm''). *See* also, for example, *id.* (framing the ''significant risk'' requirement as requiring OSHA ''to make a threshold finding that a place of employment is unsafe—in the sense that significant risks are present and can be eliminated or lessened by a change in practices.''); *Texas Indep. Ginners Ass'n* v. *Marshall,* 630 F.2d 398, 400 (5th Cir. 1980) (''The Supreme Court recently ruled that the Act requires OSHA to provide substantial evidence that a significant risk of harm arises from a workplace or employment.''). Moreover, courts have held that the OSH Act does not require the disaggregation of significant risk analyses along other lines. *See,* for example, *Lockout/Tagout II,* 37 F.3d at 670 (upholding OSHA's decision not to conduct individual significant risk analyses for various affected industries); *American Dental Ass'n* v. *Martin,* 984 F.2d 823, 827 (7th Cir. 1993) (OSHA is not required to evaluate risk ''workplace by workplace''); *Associated Builders and Contractors, Inc.* v. *Brock,* 862 F.2d 63, 68 (3d Cir. 1988) (''the significant risk requirement must of necessity be satisfied by a general finding concerning all potentially covered industries'').

Indeed, a contrary rule would impose an unworkable burden on OSHA. As the Third Circuit held *Associated Builders and Contractors, Inc.* v. *Brock,* 862 F.2d 63 (3rd Cir. 1988), stating:

The holdings in *USWA I* and *USWA II* sustained a general significant risk finding. Assuming, however, that those opinions were construed as leaving open the significant risk issue, as presently presented, the outcome would be no different. This rulemaking proceeding produced a performance-oriented information disclosure standard covering thousands of chemical substances used in numerous industries. For such a standard the significant risk requirement must of necessity be satisfied by a general finding concerning all potentially covered industries. A requirement that the Secretary assess risk to workers and need for disclosure with respect to each substance in each industry would effectively cripple OSHA's performance of the duty imposed on it by 29 U.S.C. § 655(b)(5); a duty to protect all employees, to the maximum extent feasible.

Id. at 68. Thus, OSHA need not make the sort of significant risk finding suggested by SIRC.

Rather, once OSHA makes a general significant risk finding in support of a standard, the next question is whether a particular standard's requirements are reasonably related to the purpose of the standard as a whole. *Asbestos Information Ass'n/N. Am.* v. *Reich,* 117 F.3d 891, 894 (5th Cir. 1997); *Forging Indust. Ass'n* v. *Secretary of Labor,* 773 F.2d 1436, 1447 (4th Cir. 1985); *United Steelworkers of Am., AFL–CIO–CLC* v. *Marshall,* 647 F. 2d 1189, 1237–38 (D.C. Cir. 1980). The use of a threshold to govern when the standard applies is reasonably related to the purposes of hazard communication. It limits communication to those situations in which a chemical is present in sufficient quantities that workers might experience substantial exposures to its hazards. Hazard communication can be undermined just as much by overcommunication of risks as by undercommunication. An avalanche of information about less significant hazards on a label or SDS could obscure important information on substantial hazards faced by the worker. Thresholds also save manufacturers and importers the burden of evaluating and listing chemicals present in only small quantities and not likely to result in substantial exposures (48 FR 53280, 53290 (Nov. 25, 1983). And as noted above, OSHA has provided a justification for the lower levels challenged by the Styrene Institute and Research Center: chemicals presenting these hazards may be especially hazardous at low levels, and the potential effects are of high concern.

In addition, SIRC seems to challenge only the reduction of the threshold for disclosure on labels, not the identical reduction of the threshold for disclosing the hazard on SDS for these hazards. Under the final rule, the same information for sensitizers and reproductive toxicants must appear on both the label and the SDS, avoiding the potential for confusion. The reproductive toxicant and sensitizer cut-offs are reasonably related to the purposes of the Hazard Communication Standard.

The courts have upheld similar requirements even in the absence of a significant risk finding, provided the requirements were reasonable. In *National Cottonseed Products Ass'n* v. *Brock,* 825 F.2d 482, 487 (D.C. Cir. 1987), the court upheld medical monitoring for cottonseed workers where OSHA found no significant risk. OSHA had eliminated the PEL but imposed the monitoring as a ''backstop'' to the ''no significant risk'' determination, and the court upheld the monitoring requirement because the ''evidence indicates that there is a real possibility of significant health risks'' where no PEL was imposed. Likewise, in *National Mining Ass'n* v. *MSHA,* 116 F.3d 520, 527–28 (D.C. Cir. 1997), the court upheld MSHA's decision to require oxygen at a 19.5% level, even though the evidence only showed that adverse worker effects were experienced at a lower level of 18%. The proper minimum oxygen level was ''a technical decision entrusted to the expertise of the agency,'' which was ''entitled to 'err' on the side of overprotection.'' *Id.* at 528. And in *Public Citizen,* the court upheld a requirement to post signs to warn employees of the hazards presented by ethylene oxide exposures without a separate significant risk determination, noting that signs and labels were specifically contemplated by section 6(b)(7) of the OSH Act and a ''reasonably necessary and appropriate'' part of a standard. 796 F.2d at 1502 n.16.

As explained in the Pertinent Legal Authorities section, the mixture cut-off levels are part of the HCS's general approach of providing prophylaxis against the exposure to significant risks, similar to the medical monitoring requirement in *National Cottonseed,* the higher oxygen level requirement in *National Mining Ass'n,* and the sign requirement of *Public Citizen.* The mixture cut-off thresholds are supported by substantial evidence, as discussed above and, therefore, authorized by the Act.

A related issue is the cut-off in Category 3 of Specific Target Organ Toxicity, both in Single Exposure and Repeat Exposure. Under the GHS, a cut-off/concentration limit of 20% is suggested as guidance. It is an additive cut-off, meaning that the percentages of the ingredients that meet the definition for Category 3 would be added together and compared to the cut-off. Consistent with other revisions to the GHS language that are appropriate for a mandatory standard versus a non-mandatory recommendation, OSHA proposed to make the 20% cut-off mandatory, but requested comment on it. (74 FR 50282, Sept. 30, 2009; see also A.8.3.4.5 and A.9.3.4.4.) A limit that is not mandatory will be difficult for chemical manufacturers to know how to comply with, and it will also be difficult for OSHA to enforce. Furthermore, OSHA views this provision as relaxing the current requirement, which is a cut-off of one percent for each of the ingredients in the mixture that are in and of themselves hazardous. However, consistent with A.0.4.3.2, if the classifier has information that the hazard will be evident below the specified concentration limit, the mixture is to be classified accordingly. Therefore, where the 20% is too high, the classifier will nevertheless be required to classify it appropriately below that level.

There were a number of commenters who supported making the 20% level mandatory, suggesting that it was reasonable for the U.S., promoted consistency, and that the level could be lower if data warrant (*See, e.g.,* Document ID #0313, 0324, 0327, 0329, 0330, 0338, 0339, 0353, 0365, 0381, 0410, and 0412). Others did not agree (Document ID #0323, 0328, 0344, 0376, 0379, 0382, 0393, 0399, and 0405). Some of these commenters suggested that OSHA should provide data to support making it mandatory. The GHS is drafted in voluntary terms, but the HCS is a mandatory standard, meaning that all of its provisions are mandatory as well. OSHA is unaware of specific data one way or the other on the question, but notes that this is a significant relaxation of the applicable cut-off under the current rule. Given the minor hazard presented by these chemicals, OSHA believes the 20% cut-off is appropriate to guard against overwarning. Because no alternatives were presented (other than making the provision voluntary, which is not an acceptable solution), OSHA has included the mandatory requirement in the final rule. Again, as noted above, chemical manufacturers or importers are still required to classify mixtures at lower concentrations if they have evidence that it presents a hazard, so OSHA does not believe the final rule is less protective.

Acute toxicity. In Appendix A, Chapter A.1 (''Acute Toxicity''), OSHA proposed to adopt GHS Categories 1 through 4, but not 5. The current

coverage of the HCS is greater than Category 3 of the GHS, but does not include all of Category 4. If OSHA were to adopt only three categories, it would reduce protections with regard to acute toxicity. Adopting Category 4 expands coverage somewhat. However, chemicals meeting the definition of Category 4 are already covered under the national consensus standard on labeling that many chemical manufacturers already follow (ANSI Z129). In addition, the EU covered them under their previous classification, packaging, and labeling of dangerous substances (*Directive 67/548/EEC*) and preparations (*Directive 1999/45/EC*) directives, and their adopted GHS provisions. These countries comprise the largest trading partner in chemicals for the U.S. Thus, many manufacturers are already classifying their chemicals as acutely toxic to comply with European requirements.

Adopting Category 5 would not only expand coverage significantly, it would lead to inconsistency with Europe and with the current national consensus standard. OSHA also believes that exposures of this magnitude are not likely to be encountered in the occupational setting, and that such coverage would be excessive.

Since OSHA raised this issue for comment in the ANPR, a number of respondents specifically addressed acute toxicity. The responses varied, although a number supported the approach proposed to cover through Category 4 (Document ID #0021, 0046, 0047, 0077, 0104, 0123, 0135, 0145, 0155, 0163, and 0171). For example, Dow (Document ID #0047) stated:

> Dow believes that OSHA should adopt all health hazard criteria and categories, except Acute Toxicity Category 5. While this category may be useful for characterizing consumer products, its use with the substances characterized under the HCS would be confusing and unnecessary. Dow understands that the EU and Australia have both chosen not to include Acute Toxicity Category 5 in their implementation of the GHS and that Canada is currently considering doing the same. Dow believes that the U.S. should be consistent with these other major trading partners by not including this category when it adopts the GHS.

Others suggested that OSHA propose to adopt Categories 1 through 3 (Document ID #0034, 0128, and 0141). Some argued that all categories should be adopted to ensure harmonization (*See, e.g.,* Document ID #0018, 0036, 0050, 0078, 0106, and 0116).

OSHA believes that coverage provided by Categories 1 through 4 is appropriately protective for the workplace, and leads to the greatest harmonization with workplace authorities in other countries. With regard to coverage provided by Category 5, OSHA does not preclude inclusion of information on Category 5 on the label or the SDS. Thus chemical manufacturers or importers who wish to have one label that suffices for the workplace and the consumer sector, for example, could do that and still be in compliance with the HCS. As noted earlier, commenters on the NPRM supported the categories chosen by OSHA, except for a few who thought OSHA should adopt all categories in the GHS to promote complete harmonization. However, OSHA believes that this concern is addressed by permitting such categories to be addressed on labels and SDSs with no penalty.

OSHA did not propose to adopt Category 5. The final standard does not adopt Category 5, nor include it in Table A.1.1, which describes the criteria for acute toxicity. However, calculations for the acute toxicity of mixtures that are comprised of one or more ingredients that fall into Category 5 must include the acute toxicity estimate for the Category 5 ingredients. Proposed Paragraph A.1.3.6.1(a) indicated that the calculation of the acute toxicity of mixtures would ''[i]nclude ingredients with a known acute toxicity, which fall into any of the acute toxicity categories.'' This is consistent with the GHS (Subparagraph 3.1.3.6.1(a)).

As discussed in the Proposal, OSHA believes that the exclusion of Category 5 from the criteria Table A.1.1 may lead to classifiers overlooking substances falling into this category in the mixture calculation, which could result in a higher (less protective) classification. This could also mean a lack of harmonization within the U.S. if other Federal agencies adopt Category 5, potentially requiring inclusion of these data in the calculation. To avoid this situation, OSHA has clarified the text for the mixture calculation to ensure that the ingredients that would be classified as Category 5, and thus would not be classified under the HCS, are included in the mixture calculation. Paragraph A.1.3.6.1(a) has been modified to indicate the calculation must ''[i]nclude ingredients with a known acute toxicity, which fall into any of the acute toxicity categories, or which have an oral or dermal LD_{50} greater than 2000 but less than or equal to 5000 mg/kg body weight (or the equivalent dose for inhalation);''.

OSHA has modified the text of Note (d) to Table A.1.1 to help clarify the requirements. This was done in response to a comment from Dow (Document ID #0526), which stated that they were ''confused about the table,'' and that OSHA should revisit the table and the definitions to properly harmonize the provisions.

Several commenters noted that there were errors in Table A.1.2 in the NPRM (Document ID #0376, 0393, and 0405). The errors have been corrected in the final rule.

One commenter stated that the criteria seem to assume that acute lethality data are available in all situations, and they are not (Document ID # 0321). As with all other health hazard criteria in the standard, the HCS does not require data to be generated to comply with the standard. And the final rule recognizes that many chemicals have not been tested to ascertain their hazards. For example, the formula used to calculate the acute toxicity of a mixture makes an adjustment for ingredients whose acute toxicity is unknown. In addition, the fact that a mixture contains an ingredient of unknown toxicity must be indicated on the label and SDS. This is important because in some mixtures the unknown percentage could be significant, and therefore the estimation of toxicity for the mixture has less credibility than in a situation where the majority of the ingredients have data available.

It was also suggested that the formula used for acute toxicity be displayed in a way that is more commonly used for such equations (Document ID #0641). OSHA agrees that it could be displayed in a different way, but wanted to ensure it appeared the same in the regulatory text as it appears in the GHS. However, in guidance for application of the final rule, OSHA will include the formula in the alternative format as well to assist in understanding it.

The Styrene Information and Research Center (SIRC) challenged the proposal's requirement to disclose the concentration of ingredients in a mixture whose acute toxicity was unknown (Document ID #0361). It argued that ''[i]t is unclear how that requirement would pass a significant risk test'' and that ''[i]t seems unlikely to make the user more cautious.'' However, the record shows the contrary. Both workers and union representatives testified at the public hearing on this rulemaking that workers would be more cautious when dealing with chemicals of unknown toxicity and would look for substitutes where possible (Document ID #0494). Further, Cathy Cole, President of the American Industrial Hygiene Association, testified that industrial hygienists use the fact that a chemical's acute toxicity is unknown when they perform qualitative risk

assessments. She testified (Document ID #0496 Tr. 425):

> [W]e would take that information and use it to weigh it against all the other information within that mixture. If there's an unknown, then we would most likely provide a safety factor as we did our risk assessment * * *. If there's a mixture that has a number of unknowns, then we would treat that very carefully and we would have a high risk ranking for it.

The final rule's hazard classification scheme for mixtures presenting acute toxicity hazards treats unknown toxicity in a similar way. When testing data on the mixture as a whole are not available, the acute toxicity of the mixture is determined by assuming that the nontoxic ingredients dilute the toxicity of the acutely toxic ingredients. (*See* A.1.3.6.2.) However, where the acute toxicity of a particular ingredient is not known, the final rule excludes it from the toxicity calculation. (A.1.3.6.2.4.) In effect, this means that ingredients with unknown toxicity are assumed not to dilute the toxicity of the known acute toxicants. This approach reflects the same cautious treatment of ingredients having unknown acute toxicity that the witnesses testified to, as discussed above. In addition, it is necessary to disclose the concentration of ingredients with unknown toxicity because downstream users need that information to classify any products they make with the mixture.

OSHA has also made two minor, clarifying changes to paragraph A.1.3.6.2.4 that are consistent with changes that were approved by the UN Sub-committee in December. The word ''relevant'' has been added in front of ''ingredient,'' and the word ''total'' was deleted before ''percentage.'' Therefore, A.1.3.6.2.4 in the final rule requires that if the total concentration of the relevant ingredient(s) with unknown acute toxicity is ≤10% then the following formula must be used:

$$\frac{100}{\text{ATEmix}} = \sum_{n} \frac{\text{Ci}}{\text{ATE}_{i}}$$

However, if the total concentration of the relevant ingredient(s) with unknown acute toxicity is >10%, the formula presented above is corrected to adjust for the percentage of the unknown ingredient(s) as follows:

$$\frac{100 - \left(\sum C_{unknown} \text{ if} > 10\%\right)}{ATE_{mix}} = \sum_{n} \frac{Ci}{ATE_{i}}$$

The above discussion shows that SIRC's concerns about the unknown toxicity requirement are unfounded. Employers use the fact that a chemical's acute toxicity is unknown in determining how chemicals should be handled. As such, the disclosure requirement is reasonably related to the purpose of hazard communication and, therefore, within OSHA's authority. In addition, by providing the worker with information about the limits of the known information, the requirement provides the sort of prophylactic function that has been upheld even in situations where the Agency has not made a significant risk finding. The unknown toxicity requirement is consistent with the OSH Act.

Another commenter suggested the trade secret provisions should apply to the requirement for disclosing the concentration of ingredients with unknown toxicity (Document ID #0353). The revised rule (and the GHS) do not suggest that the names of the components be disclosed—simply the aggregate percentage of the total composition that has unknown acute toxicity. So if there are three ingredients in a mixture that have no acute toxicity data available, and they comprise 20% of the mixture, the label and SDS must indicate that 20% of the mixture has unknown acute toxicity. The names of the chemicals do not have to be disclosed, and neither does the number of chemicals involved. Therefore, there should be no trade secret issue.

Skin corrosion/irritation. OSHA proposed to adopt Categories 1 and 2, but not Category 3, for skin corrosion/irritation. Category 3 covers more than the criteria for this hazardous effect under the current HCS. In addition, the irritant effects covered by Category 3 are very minor and transient, and of limited applicability in the workplace setting. The Agency received several ANPR comments supporting such an approach (Document ID #0034, 0077, 0128, 0145, and 0171). This approach is also consistent with the European Union.

As OSHA noted in the preamble to the NPRM (74 FR 50392–93, Sept. 30, 2009), significant editing was done to the GHS text for this health hazard. The criteria in the GHS lead the evaluator to conduct additional testing when information is not available. While the GHS does not require testing, the criteria imply that it should be done to complete an evaluation. This implication is not acceptable under the HCS, which is based solely on available evidence.

As noted in the NPRM discussion, work had already been initiated in the UN Sub-committee to modify the chapter on skin corrosion/irritation to address inconsistencies and clarify provisions. That work has proceeded since the NPRM, and is on the work program for the next two years as well. OSHA has made modifications to the HCS criteria to reflect discussions in the Sub-committee, and clarify areas of concern. In particular, Chapter A.2 of Appendix A, ''Skin Corrosion/Irritation,'' was reorganized in the final rule so that text and figures are consistent. Paragraph A.2.1's title was changed to ''Definitions and general considerations.'' Paragraph A.2.1.2 was added to introduce a tiered approach to follow when classifying for skin corrosion/irritation. Paragraph A.2.2, ''Classification criteria for substances using test data,'' has been modified to reflect that it covers animal test data. In Paragraph A.2.3, ''Irritation,'' the factors used to determine the corrosion/irritation potential of a substance were deleted, and the text was reorganized to follow the tiered approach to classify substances using other data elements. Figure A.2.1 was updated to make it consistent with the text, and to show the tiered evaluation scheme instead of a testing scheme. Comments had been received that indicated this figure was confusing (Document ID #0344 and 0381). Another commenter noted that the criteria are provided without indicating how they were derived (Document ID #0321). The criteria were developed by a group of experts in the OECD and were derived from the existing criteria of the countries involved. They do not specify a test method because the GHS is test method neutral, but the OECD testing guidelines are generally agreed to provide the type of information needed for classification under the GHS.

There were also several comments that pH criteria are not appropriate to use in some situations (for example, the pH of the ingredients in a mixture may not predict the pH of the mixture) (Document ID #0321, 0335, and 0381). The criteria recognize that test data for these effects provide better information

to base a classification on, but pH information can be of assistance when such data are not available.

OSHA believes the edits and changes make the chapter less confusing and clarify that testing is not required to achieve compliance. The basic provisions and approach remain the same as the GHS. The Agency is participating in the continuing work of the UN Sub-committee on this topic, and will revise the HCS if any additional clarifications are made in the criteria for these hazards that will help classifiers follow the provisions.

Serious eye damage/irritation. Proposed Appendix A, Chapter A.3 (''Serious Eye Damage/Eye Irritation''), did not include the criteria for Category 2B of eye irritation, but addressed the label elements for the category in Appendix C. A number of commenters indicated that OSHA should include the criteria for Category 2B (Document IDs #0344, 0351, 0367, 0371, 0381, and 0393), clarify coverage of Category 2B (Document ID #0376 and 0382), or exclude it (Document ID #0405). The omission of the criteria was an oversight, and OSHA has added the criteria for Category 2B to the final rule.

The text for GHS Chapter 3.3, ''Serious Eye Damage/Eye Irritation,'' posed similar issues to those described above for skin corrosion/irritation. The criteria in the GHS implied that testing might be needed to complete classification in the absence of data. This is required by neither the GHS nor the HCS. OSHA made a number of modifications to the parallel text in Appendix A, Chapter A.3, of the HCS proposal to address the perception that testing might be required when it is not. And the UN Sub-committee is also reviewing this chapter for purposes of clarifying the requirements.

As with the skin chapter, in the final rule OSHA has reorganized Chapter A.3 so that the text and figures are consistent, and so that it is clear that what must be followed is a tiered approach. The title of A.3.1 was modified to indicate it covers definitions and general considerations, and paragraph A.3.1.2 was added to introduce the tiered approach for classification. Paragraph A.3.2 (''Classification criteria for substances using animal test data'') was modified to indicate it addresses animal data. Table A.3.1 was modified to indicate that Category 1 corresponds to Serious Eye Damage and not to eye irritants, and Table A.3.2 adds the criteria for Category 2B. In A.3.3 (''Classification criteria for substances using other data elements''), the classification criteria for substances were reorganized using other data elements to make it consistent with Figure A.3.1, and to show the tiered evaluation strategy for classification. Figure A.3.1 was updated to make it consistent with the text. And Table A.3.3 now has a note to indicate that a mixture may be classified as Category 2B in cases when all relevant ingredients are classified as Category 2B. As with skin corrosion/irritation, OSHA will continue to monitor work in the UN Sub-committee to clarify these criteria, and will modify the rule to update the chapter as necessary if changes are made.

One additional issue was raised concerning the coverage of the GHS criteria for eye irritation in comparison to current criteria used by CPSC and EPA. The National Toxicology Program Interagency Center for the Evaluation of Alternative Toxicological Methods (NICEATM) (Document ID #0384) suggests that the GHS criteria are not as protective as the current criteria used by CPSC and EPA. OSHA uses the CPSC criteria in the current HCS, but does not use EPA criteria. NICEATM did an analysis of a group of chemicals to determine what their classifications would be under the different criteria, and concluded that at least 14 of 149 chemicals it reviewed (17%) would not be classified under the GHS criteria, but would have been under current HCS criteria.

OSHA asked a consulting toxicologist familiar with the GHS criteria to review the comment and the analysis, and the results of his review have been entered into the public record (Document ID #0576, 0577, and 0578). The results of this review show that all of the 14 chemicals are differently classified because they present transitory effects that resolve in 72 hours or less; the difference in classification results from the way each method accumulates transitory positive results across test animals. While there may be some differences in conclusions made under the differing criteria, the differences are less pronounced when variance in transient effects is considered (as it is under the criteria as proposed). This is explained as follows in the toxicologist's report:

> In order to compensate for this difference in approaches, OSHA has proposed to also adopt the GHS concept of ''pronounced variability''. Under this concept, for those chemicals where there is pronounced variability among animal responses, such information may be taken into account in determining the classification. As discussed specifically under OSHA's proposed criteria for Classification and Categorization of Skin Corrosion/Irritation, but only mentioned in passing under Serious Eye Damage/Eye Irritation, this notion would allow for classification in cases where there are very definite, positive irritant effects related to chemical exposure in a single animal, but the overall data set does not support classification. In cases where the response is borderline but persistent or severe but transient, the Assessor would likely classify a substance as irritating. It is noted that there are at least two chemicals among those under examination where ''pronounced variability'' would likely cause the Assessor to classify them as irritants (see data for ethyl thioglycolate and glycidyl methacrylate; fomesafen, 2,2-dimethyl-3-pentanol, and cellosolve acetate might also be classified as irritants under this concept).

The final rule retains the pronounced variability language at A.2.2.2.2 and A.3.2.3. The toxicologist also noted that:

> Finally, a quick search of secondary and tertiary sources available on-line indicates that 12 of the 14 chemicals in question would be classified as hazardous materials under both the current and proposed classification criteria. Those that would not be classified are N,N-dimethylguanidine sulfate (sub-EU classification eye and skin irritation responses; not a sensitizer; no other data found); and tetraaminopyrimidine sulfate (not an acute or chronic toxicant; identified as non-irritating by EU Scientific Committee on Cosmetic Products and Non-Food Products intended for Consumers (SCCNFP)).

Therefore, although the chemical may not be addressed as an eye irritant, it would still be considered a health hazard under the GHS—and the HCS—and thus have information available about its effects on labels and SDSs.

While OSHA appreciates the concerns raised by NICEATM, the criteria are being finalized as proposed, other than the modifications made for clarification purposes. It appears that the pronounced variability considerations will address some of the concerns raised, and that the primary remaining differences involve transient effects of relatively low concern. Both CPSC and EPA were involved in the development of the criteria in the GHS, and were aware of the differences between their existing systems and the agreed harmonized criteria. In harmonizing between the existing systems, the criteria selected were between what currently exists in the U.S. and in the EU. The classification criteria in each existing system is not a bright line determined by science, but rather a scientifically influenced policy determination, and as discussed elsewhere, an inevitable part of adopting harmonized criteria is that a few borderline chemicals might be dropped. No other stakeholders have raised the issue of whether the criteria are protective enough. OSHA is proceeding with the final rule because it believes that in this situation,

maintaining harmonization with the GHS is ultimately more important for worker health. This situation will continue to be monitored as implementation takes place to ensure that it is appropriate.

Respiratory or skin sensitization. The final rule makes only minor changes to the proposed text of Appendix A, Chapter A.4, ''Respiratory or Skin Sensitization.'' The footnotes have been re-numbered since they were out of sequence in the NPRM. And the term EC3 has been explained in a footnote to Tables A.4.3 and A.4.4 (estimated concentration of test chemical required to induce a stimulation index of 3 in the local lymph node assay).

The GHS criteria for respiratory and skin sensitizers have one category for each type of sensitization, but also give the option of dividing that one category into two sub-categories, which involves a differentiation in the type of evidence available. In the NPRM, OSHA proposed to adopt the sub-categories for classification. One commenter strongly supported adopting sub-categories for these sensitizers (Document ID #0381), while another did not support it because the EU has not adopted sub-categories (Document ID #0376). OSHA is adopting the sub-categories as proposed. However, the Agency recognizes that there are situations where data are not available to place the chemical into one of the sub-categories. The GHS itself addresses this in 3.4.2.1.1.1 (respiratory sensitization), and 3.4.2.2.1.1 (skin sensitization). Therefore, under the revised HCS, simply classifying the chemical as Category 1 will be sufficient in cases where data are insufficient to assign a subcategory. The American Chemistry Council (Document ID #0393) suggested that more guidance is needed to differentiate potential and severe sensitizers for placement into the sub-categories. OSHA believes that this type of guidance should be developed through the Sub-committee process, rather than by countries independently developing guidance for application. The Agency will consider requesting the Sub-committee to develop such guidance.

Germ cell mutagenicity. The comments on this health hazard centered on whether or not it should be included in Appendix A. Procter & Gamble (Document ID #0381) and the American Chemistry Council (Document ID #0393) argued that it should not be included. The Soap and Detergent Association (Document ID #0344) also argued for exclusion, but said if it is included, only Category 1A should be covered. Ecolab (Document ID #0351) also argued that only Category 1A should be covered. These commenters argued that it is already covered by reproductive toxicity and carcinogenicity, and adding a separate hazard class would create a training burden.

OSHA disagrees. First, while the current HCS does not define mutagenicity as a separate health hazard, it is covered by the reproductive toxin definition. Under the GHS, mutagenicity is not covered by reproductive toxicity, and OSHA's failure to adopt the mutagenicity category would render the final less protective than the current HCS. The hazard class will have to be adopted to maintain coverage. Secondly, though mutagenicity data are used to predict carcinogenicity, the mutagenicity hazard is not covered by the carcinogenicity criteria. Furthermore, little additional burden for training can be claimed for what is already covered under reproductive toxicity in the current HCS.

All of these commenters argue that the HCS should be as consistent with the EU as possible. The EU has already adopted these criteria, so excluding them would not be consistent with the EU. OSHA is maintaining the hazard class as part of the HCS, and including both categories. It is OSHA's understanding that at present there are no chemicals that meet the criteria for Category 1A, so currently this has no burden associated with it—although there may be minimal burdens if new data in the future place chemicals in this category. (*See, e.g.,* Annex VI to the EU's former directive on classification and labeling, which states: ''To place a substance in category 1, positive evidence from human mutation epidemiology studies will be needed. Examples of such substances are not known to date. It is recognized that it is extremely difficult to obtain reliable information from studies on the incidence of mutations in human populations, or on possible increases in their frequencies.'') Chemicals in Category 2 are frequently used already in discussions of potential carcinogenicity, since mutagenicity test results are used to predict carcinogenicity. Thus, there is little burden associated with adopting that category either. Therefore, OSHA has retained Appendix A, Chapter A.5, ''Germ Cell Mutagenicity.''

OSHA included a new heading in A.5.4 entitled ''Examples of scientifically validated test methods.'' In the interest of maintaining current protections, as well as being consistent with implementation in the EU, germ cell mutagenicity is adopted in the final rule as proposed.

Carcinogenicity. The primary change to the carcinogenicity hazard class as proposed in Appendix A, Chapter A.6, ''Carcinogenicity,'' is the addition of A.6.4, ''Classification of carcinogenicity.'' In the current HCS, carcinogenicity was determined in part by consulting the National Toxicology Program's biennial Report on Carcinogens (RoC), or the International Agency for Research on Cancer's monographs. In addition, chemicals that are regulated by OSHA based on their carcinogenicity (*i.e.,* there is a substance-specific standard addressing the chemical, and the chemical poses a risk of carcinogenicity), are always covered by the HCS. The IARC and NTP documents are prepared based on the evaluation of data by experts convened by these organizations. A number of commenters suggested that this should still be permitted under the GHS-aligned criteria. For example, the United Steelworkers argued (Document ID #0403):

> The current Hazard Communication standard includes a reference to several lists of chemicals automatically presumed to be hazardous, such as the lists of carcinogens published by the National Toxicology Program (NTP) and the International Agency for Research on Cancer (IARC). The proposal removes references to such lists, in favor of a more detailed and complicated classification system. While that classification system is required by the GHS, the lists provide useful guidance and should not be removed altogether.
>
> We suggest the following compromise: OSHA should state in the regulatory text that a classifier may presume that the presence of a chemical on one or more of those lists is sufficient to classify the chemical as hazardous with respect to the hazard covered by the list. (OSHA should also state that the inverse is not true: The absence from a list does not indicate the lack of a hazard.) This does not mean that the classifier is required to classify a chemical as hazardous based solely on the list, only that he or she is free to do so. OSHA should also indicate in the preamble that the Agency will use the lists as guidance in enforcement, and that a classifier who ignores the lists should be prepared to show why his or her judgment is better than the judgment of, for example, NTP or IARC.

Similarly, Morganite Industries, Inc. and Morgan Technical Ceramics, stated (Document ID #0321):

> For example, IARC, NTP and other qualified organizations assess carcinogenicity and come to published conclusions. We do not understand why the proposed Hazard Communication Standard establishes procedures for chemical suppliers to conduct such assessments, seemingly asking them to conduct their own evaluations in the manner

of similar to these expert agencies. That makes no sense to us. Why not just refer to the conclusions published by these agencies? That would shorten and simplify the regulation, it would eliminate large parts of the difficult language and it would eliminate regulatory requirements that are in fact infeasible for most preparers of MSDS to comply with.

OSHA agrees with these commenters that allowing evaluators to rely on IARC and NTP could make classification easier for them, as well as lead to greater consistency. Therefore, A.6.4.1 has been added to the criteria in the final rule to indicate that classifiers may treat these sources as establishing that a chemical is a carcinogen without applying the criteria themselves. And A.6.4.2 reiterates that OSHA-regulated carcinogens are covered under the HCS.

In order to facilitate the use of IARC and NTP determinations as sources for purposes of classification, non-mandatory Appendix F has been significantly modified. In the NPRM, Appendix F was simply a verbatim quote of guidance from IARC on determining carcinogenicity. In the final rule, Appendix F has been updated to reflect the latest version of that IARC text, but also includes additional guidance on how to use IARC and NTP to make carcinogenicity classifications. The inclusion of this guidance should make classification easier for chemicals addressed by these sources, and should also provide parameters for the type of weight-of-evidence decisions that are appropriate under the GHS-aligned criteria.

The following table is included in Part D of Appendix F, and may be used to perform hazard classifications for carcinogenicity under the HCS. It relates the approximated GHS hazard categories for carcinogenicity to the classifications provided by IARC and NTP, as described in Parts B and C of Appendix F:

TABLE XIII–2

Approximate equivalences among carcinogen classification schemes

IARC	GHS	NTP RoC
Group 1	Category 1A	Known.
Group 2A	Category 1B	Reasonably Anticipated (See Note 1).
Group 2B	Category 2.	

Note 1:
1. Limited evidence of carcinogenicity from studies in humans (corresponding to IARC 2A/GHS 1B);
2. Sufficient evidence of carcinogenicity from studies in experimental animals (again, essentially corresponding to IARC 2A/GHS 1B);
3. Less than sufficient evidence of carcinogenicity in humans or laboratory animals; however:
a. The agent, substance, or mixture belongs to a well-defined, structurally-related class of substances whose members are listed in a previous RoC as either ''Known'' or ''Reasonably Anticipated'' to be a human carcinogen, or
b. There is convincing relevant information that the agent acts through mechanisms indicating it would likely cause cancer in humans.

While the criteria for carcinogenicity (as well as other health effects) are largely based on weight of evidence evaluations, there are also provisions in the GHS for countries that want to ensure that all potential carcinogens are adequately captured by the criteria. Thus paragraph 3.6.2.6 of the GHS chapter on carcinogenicity states:

* * * For inclusion into Safety Data Sheets, positive results in any carcinogenicity study performed according to good scientific principles with statistically significant results may be considered.

OSHA chose to include this requirement in Figure A.6.1 of Appendix A in the NPRM under Category 2, suspected human carcinogen. Specifically, the statement read:

Positive results in any carcinogenicity study performed according to good scientific principles with statistically significant results qualifies for referencing the chemical as, at the least a Category 2 carcinogen.

The Styrene Information and Research Council (SIRC) (Document ID #0361) argues that the ''one positive study'' criterion is inconsistent with the weight of evidence approach. In fact, it is not part of the weight of evidence approach, but rather reflects the Agency's decision to ensure that the current level of protection in terms of identifying potential carcinogens in the workplace is maintained in the HCS as permitted by the GHS provisions.

SIRC also indicated that it is not clear what is meant by ''referencing'' the chemical as, at the least, a Category 2 carcinogen. OSHA agrees that the inclusion of this language in Figure A.6.1 is not as clear as it could be in terms of what is required. In the final rule, OSHA has separated this requirement from Category 2, and added a new heading of ''Other considerations'' to the table. The text for the ''Other considerations'' is: ''Where the weight of evidence for the carcinogenicity of a substance does not meet the above criteria, any positive study conducted in accordance with established scientific principles, and which reports statistically significant findings regarding the carcinogenic potential of the substance, must be noted on the safety data sheet.'' Categories 1 and 2 will remain based on weight of evidence, but the data that meet the definition of ''other considerations'' must also be provided on the SDS for the chemical. This will maintain the protections of the current rule and provide information to downstream users so they can determine the appropriate protective measures to be taken in these situations.

In paragraph A.6.3.2 of the NPRM, OSHA included the mixture approach in GHS paragraph 3.6.3.1 regarding use of test data as a whole to characterize the carcinogenic potential of a mixture:

A mixture may be classified based on the available test data for the mixture as a whole. In such cases, the test results for the mixture as a whole must be shown to be conclusive taking into account dose and other factors such as duration, observations and analysis (*e.g.,* statistical analysis, test sensitivity) of carcinogenicity test systems.

SIRC (Document ID #0361) similarly took issue with this provision:

Again, the use of the word ''conclusive'' appears to be an inappropriate attempt to apply the European Precautionary Principle to this issue. It is inconsistent with the fundamental principle that hazard communication is to be based on the application of expert judgment to known information and not require chemical testing (either explicitly or as an inevitable practical requirement to avoid unacceptable economic consequences). The word ''conclusive'' should be replaced with the word ''adequate'' or ''persuasive.''

The provision in A.6.3.2 recognizes that it is difficult to accurately characterize the carcinogenicity of a mixture with an ingredient that is clearly carcinogenic. It requires skilled, expert judgment, and test results on the mixture as a whole may be misleading. Therefore, the

experts who developed the carcinogenicity criteria believed that given the critical nature of this effect and the known limitations of assessing carcinogenic potential in a mixture, it was appropriate to allow testing of the mixture as a whole to supersede an evaluation based on the carcinogenic potential of a known ingredient only when the data allow a sufficient level of confidence about the mixture's hazards. OSHA agrees with the findings of these experts, and does not believe that the word ''conclusive'' needs to be replaced. This provision remains the same in the final rule. It also does not require or imply that any testing of chemicals be performed. It is actually rather unusual to have mixtures tested for any types of effects, so it is expected that this provision will not be applied frequently. If a test is performed voluntarily with the purpose of avoiding characterization of a mixture as a carcinogen, it is very important that the test provide conclusive evidence before depriving downstream users of information that ingredients in the mixture present a carcinogenicity hazard.

In addition to the technical considerations, SIRC (Document ID #0361) (as well as SPI, Document ID #0392), repeatedly suggests that the precautionary principle, or European approaches, are the genesis of various provisions. First, OSHA does not agree that the precautionary principle had any part in the GHS, or the HCS, provisions. The HCS is an information transmittal standard, not a standard that requires the implementation of controls or other risk management approaches. The precautionary principle generally applies to competent authorities, and allows them to regulate or establish controls in situations where complete information is not available about the situation. That certainly does not apply to this provision in the HCS, which requires definitive data before allowing a chemical manufacturer or importer to designate a mixture as not being carcinogenic, although it contains an ingredient that clearly has a carcinogenic potential. The HCS is a standard that is intended to provide information to users of chemicals so they can make their own determinations as to what controls are needed to prevent adverse health effects or the effects of physical hazards. The better information they have about the chemicals in their workplaces, the more likely they will be able to make their own risk assessments, and choose appropriate risk management measures. The provisions of the HCS—as well as the GHS—are designed to ensure that such information is available to users.

The criteria proposed are adopted in the final standard, with the addition of the paragraphs referring to NTP, IARC, and OSHA-regulated substances, and supplemented by the revised non-mandatory Appendix F.

Reproductive toxicity. This hazard class, described in Appendix A, Chapter A.7, was proposed to have two hazard categories (Category 1, which is subdivided into two sub-categories based on human evidence, and Category 2, which also includes evidence from animal studies). In addition, it requires consideration of effects on or via lactation. Several commenters argued that OSHA should not adopt effects on or via lactation (Document ID #0344, 0351, and 0381). The rationale provided is that there is no standard assessment method. However, the criteria already recognize that there is no standard assessment method, and provide the types of information that can be used to assess whether a chemical poses this effect. While such information may not be available for many chemicals, there are certain types of products that may have such information available, and it is information that needs to be provided to exposed workers. Therefore, OSHA is maintaining effects on or via lactation in the final rule. In addition, this maintains consistency with the EU approach.

The only change OSHA has made in the final rule is to change ''should'' to ''shall'' in A.7.2.5.4, since it is mandatory in the HCS. Otherwise, the criteria are adopted as proposed in the text of the final rule.

Specific target organ toxicity single exposure (STOT–SE). This hazard class, described in Appendix A, Chapter A.8, was proposed to have three categories. The first two categories deal with differences in the type of evidence available to assess the effect, while the third addresses transient target organ effects, such as narcotic effects and respiratory irritation. Several commenters indicated that Category 3 could be adopted without adopting Category 2 (Document ID #0344, 0351, 0381, and 0393). Procter & Gamble (P&G) (Document ID #0381) argues that Category 2 should not be adopted:

> There are also a significant difficulty and potential unintended outcome that weigh against applying Category 2. Animal studies may be done for a variety of purposes, some of which are not relevant to consumer product uses, and the interpretations of animal data from these types of studies often yield conclusions not relevant to consumer products. Using the outcomes from animal studies for classification into Category 2, especially studies at exposures near the point of morbidity, requires an unusual level of expertise that many classifiers would not possess. In addition, classification into Category 2 relies on interpretation of the phrase ''relevant to human health,'' which would involve an additional expertise. Therefore, Category 2 should not be adopted.

There are a number of difficulties with this argument. First, this section addresses protection of workers exposed to chemicals, and not the assessment of consumer products and exposures. Many consumer products are not covered by the HCS, although provisions in the scope and application cover those products where they are used in the workplace in a manner different than consumers would use them, or with a more extensive duration and frequency of use.

In devising the Category 1/Category 2 approach to classifying specific target organ toxicity after single (and repeated) exposure, the framers of the STOT–SE (and STOT–Repeated Exposure) criteria sought to establish a means by which the chemical manufacturers and importers could communicate to the worker information as to both the nature and the severity of adverse systemic and target organ effects. The final rule provides detailed criteria to clarify what would be considered an ''adverse'' effect (*See* A.8.2.1.7.3*),* and it also provides specific examples of effects (''changes'') that might be seen in animal studies, yet would not be considered to be ''adverse'' (A.8.2.1.8).

Using these criteria and examples, classifiers will be able to consider whether a change was, as required by Category 2, ''of *relevance for human health.''* In specific cases when an evaluated change was deemed not to be relevant, the classifier is allowed to discount specific toxicological study findings that are not relevant to human hazard assessment and not classify. OSHA believes that classification under Category 2 will be no more difficult than other hazards under the rule, and that no ''special additional experience'' will be needed to classify for Category 2, as suggested by P&G.

Additionally, the GHS-based STOT criteria proposed for adoption by OSHA sought to introduce the concept of dose response to the communication of specific target organ toxicity hazards. Such a concept has long been part of the assessment of acute toxicity hazards, but has been missing from the communication of many other health hazard endpoints. Adoption of both Categories 1 and 2, as proposed, allows the chemical manufacturer/importer of a chemical to convey to the worker additional information as to the

characterization of the specific target organ hazard by providing some general measure of whether an effect (change) might be expected at low (presumably occupationally relevant) exposure, or whether it would be seen only in cases of unusually high exposure (*e.g.,* catastrophic loss of safety controls).

P&G also suggests that Category 2 is inconsistent with paragraph 3.8.1.3 of the GHS in that ''it does not rely primarily on human data * * *.'' However, while GHS 3.8.1.3 (A.8.1.3 in the final rule) does say that human data will be the ''primary source for classification,'' it also specifically states that classification in this hazard class may also be made on reliable evidence ''in experimental animals, toxicologically significant changes * * *.'' Thus, P&G's contention is not accurate. In addition, animal data are used or referred to throughout the criteria in the GHS for health hazards, and the use of such data to predict effects in exposed humans is a standard toxicological approach.

In addition to its appropriateness for protection of workers, Category 2 has been adopted by the EU, and adopting it in the final rule will thus maintain consistency with the EU as well.

Aspiration hazard. OSHA did not propose to adopt Category 2 for aspiration hazards covered by the GHS. This category appeared to be more appropriate for the consumer sector than the workplace. OSHA does not specifically address aspiration hazards in the current HCS although the Agency believes the more relevant and serious Category 1 aspiration hazards are captured under the broad scope of the rule. Several ANPR commenters agreed that Category 2 should not be covered in the HCS (Document ID #0034, 0077, 0128, 0145, and 0171), and the EU does not include it in their requirements. Others suggested that aspiration should not be covered at all since it is not relevant to the occupational setting (Document ID #0102, 0104, and 0163).

Several commenters on the NPRM also argued that aspiration hazard should be completely excluded from the revised HCS (*See, e.g.,* Document ID #0373, 0393, 0398, 0486, and 0528). In addition, one comment suggested that the criteria could be interpreted as applying to drowning, and is overbroad (Document ID #0353).

The primary proponent for complete exclusion of aspiration as a hazard in the revised GHS was the Hydrocarbon Solvents Panel (the Panel) of the American Chemistry Council. In their post-hearing comments, the Panel summarized their position as follows (Document ID #0528):

> (1) OSHA should not adopt the Aspiration Toxicity class under the GHS because, as demonstrated by data submitted to the record, aspiration as a route of exposure is not common in the industrial setting, and is not a significant cause of occupationally related severe or fatal poisonings.
>
> (2) Should OSHA include Aspiration Toxicity as one of the Health Hazard classes, the Panel urged that OSHA not require the Health Hazard Symbol be used as part of the pictogram because it does not accurately symbolize the nature of the hazard represented by the aspiration route of entry, and could be potentially misleading.
>
> (3) Should OSHA include Aspiration Toxicity and a symbol, the Exclamation Mark symbol is more appropriate for the Aspiration Hazard Pictogram. Of the existing symbols in the proposed rule, the Exclamation Mark symbol is more representative of an actual aspiration episode. The Exclamation Mark would be a better choice to connote the hazard endpoints and response necessary in an aspiration event, due to the immediate need for intervention in an aspiration episode.
>
> (4) If OSHA is unwilling to adopt the Exclamation Mark symbol for Aspiration Toxicity, we request that OSHA forward the concern to the UNSCEGHS for its consideration.

With regard to the Panel's first point, OSHA agrees that this route of exposure is not frequently found in the occupational setting. But that is different than saying it does not occur, or should not be a concern. NIOSH has submitted a number of studies and reports to the record that document concerns about aspiration (Document ID #0523 and 0524), and address occupational exposures as well (Document ID #0523). For example:

> *Amoruso et al.* [2008] reported that aspiration of mineral spirits into the lungs may produce serious damage leading to bronchopneumonia that may be fatal within 24 h[ours] * * *.
>
> *Rodriguez et al.* [1991] reported a case incident where deaths in 3 crude oil tanker workers were reported as attributed to pulmonary aspiration as evidenced by histopathology studies. The hypothesized mechanism of deaths included the contributing factors of asphyxia by toxic gases leading to loss of consciousness, traumatic injury and aspiration.

A number of other cases are described in the NIOSH comment. The Panel itself noted two aspiration fatalities in the period from 2003 to 2007, one of which was related to a corrosion inhibitor, and the other to sodium bisulfate (Document ID #0486, 0494 Tr. 212). Moreover, the Panel's chair testified that her company includes aspiration hazard warnings on all of its products (Document ID #494 Tr. 214–15). Therefore, it is clear to OSHA that there are legitimate concerns about aspiration in terms of both occupational injuries and fatalities, and that aspiration hazards need to be included in the scope of the HCS. Thus, OSHA included Chapter A.10, ''Aspiration Hazard,'' in Appendix A in the proposed rule and has retained it in the final rule.

With regard to the symbol, the application of the more severe health hazard symbol to a Category 1 hazard category is consistent with how the symbols are applied to all of the health hazards. Adopting the exclamation mark in the U.S. for aspiration Category 1 would make the HCS inconsistent with other countries' rules regarding aspiration hazard, which would present difficulties for countries exporting to the U.S., and potentially create inconsistencies in what workers see on labels and SDSs. This would not be an effective communication approach to aspiration hazards. Therefore, OSHA does not agree that the exclamation mark should be permitted for Category 1 aspiration hazards. In terms of presenting it to the UN Sub-committee as an issue, OSHA will take that suggestion under advisement. However, industry stakeholders are free to make this suggestion to the Sub-committee themselves through submission of a paper.

With regard to the contention that drowning in water could conceivably be read as being covered by the aspiration hazard criteria, OSHA assures stakeholders that drowning in water is not covered and that the HCS will not be interpreted as addressing drowning in water as an effect covered by the rule.

Aspiration Hazard, Category 1, is included in the final rule as proposed.

Appendix B, Physical Hazards. Appendix B includes the criteria for the physical hazards proposed to be covered by the HCS to be consistent with the GHS. The current HCS covers these hazards, but the definitions, while similar, are not the same as those included in the GHS. The GHS based its physical hazard criteria on those incorporated into the United Nations' Recommendations on the Transport of Dangerous Goods. In the U.S., the Department of Transportation (DOT) has already harmonized its definitions with the UN, and thus, with few exceptions, the GHS. While OSHA's initial physical hazard definitions were consistent with the DOT definitions at the time the current HCS was promulgated, DOT's harmonization with the international requirements resulted in the two agencies having different definitions. Thus the U.S. has not been domestically harmonized for some years. Adopting the same definitions in this rulemaking as DOT has in this rulemaking will have

the additional benefit of accomplishing substantial domestic harmonization.

As with Appendix A and the health hazard criteria, OSHA edited Chapter 2 of the GHS (''Physical Hazards'') to shorten the discussions and focus only on the criteria in the proposed revisions. Decision logics and hazard communication information are not included. As with health hazards, OSHA tried to maintain the current scope of the HCS for physical hazards in the proposal, as well as being as consistent as possible with trading partners, particularly the European Union. One exception may be flammable gases, where it appears that more flammable gases will be covered by OSHA adopting Category 2 than are currently covered by the HCS. OSHA is adopting all of the physical hazards in the GHS.

The one deviation from the approach adopted by the European Union is in the proposed adoption of Categories 1 through 4 for flammable liquids. The European system only addresses Categories 1 through 3. The current HCS covers flammable liquids in Category 4, and exclusion of this category would result in reduced protection, which OSHA does not believe is appropriate. Thus Category 4 is included in the revised HCS.

One edit that should be noted occurs in the criteria for explosives. The GHS criteria currently use the term ''article'' in a manner that is inconsistent with that term as used in the workplace in the U.S. OSHA has changed the term to ''item'' in these criteria. This modification was supported by stakeholders (*See, e.g.,* Document ID #0362).

While OSHA believes that harmonizing with DOT provides significant benefits, there were some concerns regarding this approach that arose in reviewing the physical hazard criteria. These concerns involved the test methods referred to in the GHS criteria, which are based on issues related to the packaging and volume in transportation. Packaging is obviously a major concern in transport, and is used to address or mitigate the risk of conveying certain types of chemicals. These chemicals may or may not be present in the workplace in the same size or type of packaging and the relevance of these factors in the test methods are questionable in terms of workplace exposures. OSHA invited comment on these factors, including comments on the appropriateness of the criteria (including the test methods and references to packaging or volume) when applied to the workplace, and any suggestions that interested parties have to address these issues. Of particular interest were criteria for self-reactive chemicals, organic peroxides, self-heating chemicals, and explosives. Commenters indicated that the criteria could be applied to the workplace (*See, e.g.,* Document ID #0330, 0336, 0383, and 0405). Others specifically noted that OSHA should maintain consistency with DOT (*See, e.g.,* Document ID #0338, 0344, 0351, 0376, 0379, 0381, and 0392). For example, the Industry Minerals Association—North America stated (Document ID #0379):

> The classification, labeling, handling and storage of chemicals related to transport concerns should remain aligned with the principles of HCS. OSHA should seek where possible to reduce incompatibilities between HCS criteria and US DOT transportation requirements.

Accordingly, OSHA has decided to carry through these requirements to the final rule as proposed. OSHA is satisfied that, in this respect, the criteria proposed are appropriate.

The Society of the Plastics Industry, Inc. (SPI) (Document ID #0392) contends that the requirements will not be possible to implement for organic peroxides:

> The GHS would require that the SDS for organic peroxide include:
> (1) Recommended use of the chemical and restrictions on use;
> (2) Precautions for safe handling;
> (3) Conditions for safe storage, including any incompatibilities, and
> (4) Appropriate engineering controls.
> Compliance with these requirements, which include principles from the EU regulation for the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), presents a particular concern for organic peroxide producers following transportation and initial storage in the DOT-regulated transport container. As written, compliance would present unreasonable difficulties and appears to be infeasible for suppliers of these chemicals. Customers are likely to handle and use these materials under significantly different conditions once they remove the organic peroxides from the packages in which they were transported.

SPI further recommends that OSHA require ''that labels and SDSs include a generic statement of fact indicating that changes in risk and hazard can occur when these self-reactive materials are moved from normal transport and storage conditions into process settings, and that they may require assessments by specialists.'' SPI also suggests that OSHA should be harmonizing with DOT in this area.

SPI indicates that these requirements for information on SDSs originate with REACH requirements in Europe. In fact, OSHA has always required such information on SDSs (with the exception of intended use of the chemical, and restrictions on use), and these requirements preceded REACH by many years—as did the negotiated text of the GHS. In § 1910.1200 (g)(2)(viii) and (ix) of the HCS promulgated in 1983, the preparer of the MSDS is required to provide any generally applicable precautions for safe handling and use, and any generally applicable control measures such as engineering controls, which are known to the chemical manufacturer, importer or employer. OSHA also notes that the manual supplied and written by SPI: ''SAFETY AND HANDLING OF ORGANIC PEROXIDES: A Guide'' (dated August 1999), recommends that downstream users consult labels and MSDSs for handling information (Document ID #0392). OSHA does not agree that the SDS requirements in the NPRM, and the final rule, are infeasible or even substantially different than what has been required by OSHA since 1983. The Agency does not agree that the suggested statement should be required by OSHA regarding organic peroxides. Chemical manufacturers and importers of organic peroxides are free to provide whatever advice they deem appropriate in the supplementary information part of the label, or on the SDS, to guide downstream users for appropriate handling, as long as the advice does not conflict with the required hazard communication information.

With regard to harmonizing with DOT, the criteria in the final rule are the criteria that DOT adopted from the UN Transport recommendations. Therefore, OSHA is harmonizing with DOT through this rulemaking.

One commenter indicated that there was concern that criteria based on transport classification may confuse workplace application, and guidance would be needed (Document ID #0339):

> Concerns have been expressed that the criteria developed for transport concerns, as stated in the GHS, express very specific constraints, or ''worse case scenarios'', which can be confusing to suppliers and users of chemicals who are reading the Safety Data Sheets (SDSs)/labels, etc., without benefit of the context. PRR believes this is an area in which OSHA could develop informational materials to help chemical suppliers and users understand the rationale behind physical hazard classifications.

OSHA will keep this suggestion in mind as guidance materials are developed.

Only minor editorial revisions have been made to Appendix B after reviewing all of the comments received. While a great number of changes were suggested by one commenter (Document ID #0353), most have not been adopted, consistent with the discussion above on

the background for Appendixes A and B. This approach is to maintain consistency with the GHS and DOT, as well as the EU.

The modifications made in the final rule include changing metric references to units used in the U.S., and modifying references to documents incorporated by reference to make them consistent with OSHA's requirements for such references. There are no technical changes to the criteria. Therefore, Appendix B in the final rule is substantially the same as proposed.

Classification Database

One interesting comment that was submitted by a number of respondents to the ANPR involved development of a classification database (Document ID #0047, 0050, 0053, 0054, 0038, 0155, 0160, and 0165). Opinions as to who would develop and maintain such a database varied (OSHA, U.S. industry, and an international body were all mentioned). It appears that the European Union will be making such a database available for compliance with its requirements, as have Japan, Taiwan, South Korea, and New Zealand. Concerns have been raised by stakeholders that classifications in these databases are different for the same chemical. OSHA invited additional comment on this issue in the NPRM (74 FR 50284, Sept. 30, 2009), and received a number of responses.

Many supported the concept of having such a database (Document ID #0328, 0329, 0330, 0335, 0336, 0339, 0341, 0352, 0365, 0366, 0379, 0383, 0389, 0408, 0410, and 0453). There were also various comments about how a database might be done. Some thought OSHA should do the classifications and maintain them online, or that the classifications should be considered ''official'' (Document ID #0330, 0341, and 0453). Others were concerned about the Agency's ability to develop and maintain a database (Document ID #0339), or said it should only be done if resources were provided to maintain it (Document ID #0365). Alternatively, resources could be provided for classifiers to help improve the quality of their classifications (Document ID #0365).

Others suggested that NIOSH could be tasked with developing and maintaining the database (Document ID #0341 and 0408). NIOSH commented that funding is not currently available, and that OSHA may wish to partner with the EU database efforts (Document ID #0412). Additionally, NIOSH and another commenter (Document ID #0383) suggested alternatives to developing a database using existing information such as the Department of Homeland Security's database; using International Chemical Safety Cards that currently cover 1,650 substances and are translated into many languages; or adding GHS classifications to the National Library of Medicine, including its Hazardous Substances Data Bank. NIOSH is also updating its Pocket Guide to include GHS classifications.

Another suggestion was to have the UN develop a database so there is a globally harmonized list, and the Department of Labor could help support it (Document ID #0328 and 0335). The National Fire Protection Association (NFPA) (Document ID #0366) suggested that its database of 2,500 chemicals could be useful in the transition. Other commenters suggested that suppliers can provide classifications to a central repository (Document ID #0352, 0408, and 0410), but one commenter warned that if left to manufacturers, there would be differences that would have to be resolved downstream (Document ID #0328). Another comment raised a concern that, while a common database might be useful, it could also interfere with weight-of-evidence determinations (Document ID #0379). However, such a database could prove useful for substances, which would provide the basis for mixture classifications (Document ID #0335).

Other commenters did not support having a classification database (Document ID #0324, 0344, 0351, 0370, and 0377), or indicated that if OSHA were to develop a classification list, it should be non-binding guidance, and include stakeholder input and global accessibility (Document ID #0344, 0381, 0393, and 0405). Others were concerned that a common database would create another unharmonized list of classifications compared to lists in other countries (Document ID #0344), and that manufacturers should have the responsibility for classification (Document ID #0324 and 0405). Also, a company could have valid data that contradicts a classification assigned in a database, and should be allowed to use its own information (Document ID #0351). There was also a concern that such a list might impede progress by not using the best available data (Document ID #0377). Another commenter argued that the database would need to be internationally developed and maintained to be useful, which would result in the elimination of national or regional lists (Document ID #0376).

OSHA is very interested in whether an international database of classifications could be developed and maintained. It is not likely to be feasible for OSHA to develop and maintain a U.S.-based database, which, as some have noted, would be less useful than an internationally harmonized approach that preempts countries and regions from developing their own approaches. The subject has been raised and discussed in the UN Sub-committee, and a correspondence group has been established to explore the issue further. OSHA has volunteered to lead that group and to help form a consensus position in the Sub-committee on options to address this issue. In the meantime, some of the suggested sources can provide extensive information to assist businesses with GHS classifications, particularly small businesses with fewer technical resources. The International Chemical Safety Cards—which are linked on both OSHA and NIOSH Web pages—are one such resource. The OECD has also established a global chemical portal that includes extensive information on chemicals (*www.oecd.org/ehs/eChemPortal*).

(e) Written hazard communication program. The GHS does not include provisions for a written hazard communication program. Thus the provisions of this paragraph are not directly affected by implementation of the GHS. The only changes proposed align terminology *(i.e.,* the proposal uses the term ''safety data sheet'' rather than ''material safety data sheet'').

The written hazard communication program requirements in paragraph (e) are intended to ensure that hazard communication in a given workplace is coordinated and comprehensive. An employer's program must include a list of the hazardous chemicals known to be present in the workplace (paragraph (e)(1)(i)). This list is basically an inventory of the chemicals the employer must have safety data sheets for, and must be available to employees so they, too, can determine what chemicals should be included under the hazard communication programs in their workplace. The list can be maintained by work area or for the workplace as a whole, and must be kept by an ''identity'' of the chemicals (which will be the ''product identifier'' under the final rule). In other words, the inventory can be common names or product names, rather than individual chemical ingredients of each product by specific chemical identity or chemical name.

The employer's hazard communication program must also include how the standard's requirements for labels, SDSs, and training will be met (paragraph (e)(1)); how the hazards of non-routine tasks will be addressed (paragraph (e)(1)(ii)); and how hazard communication will be

handled in a multi-employer workplace situation (paragraph (e)(2)). OSHA has provided guidance over the years on completing a written program, and there are many sample programs in circulation. The program need not be lengthy or complicated, but it should have enough detail to provide the reader with a blueprint of the workplace-specific program.

Several comments to the ANPR were received from the Small Business Administration (SBA) and others that suggested there would be significant burdens associated with revising the written program as a result of implementing the GHS (*See, e.g.,* Document ID #0022, 0027, 0111, and 0164). Revising the chemical inventory was cited by these commenters as one aspect that was likely to be burdensome. Since the chemical inventory is basically a list of the products an employer has in the workplace that are considered hazardous, the only way this list would change as a result of implementing the GHS would be if something that was not hazardous before is now, or vice versa. OSHA believes that this is not a significant concern for three reasons. First, it would be unusual for a chemical to only have one hazardous effect associated with it so that the overall determination of hazard would be affected by a change in classification in one hazard class. Second, because HCS currently covers hazardous chemicals, unless the chemical is new, it is highly probable that it is already covered. Third, as discussed above in relation to paragraph (b) (Scope and application), OSHA does not believe that the scope of hazards covered by the final rule is substantially different than the current HCS.

The most likely differences resulting from re-classification under the final rule are that a chemical would be placed in a category under a hazard class that does not currently include categories. It may also be possible that a chemical may fall into a different category where there are already defined categories (such as flammability). Neither of these differences would necessitate a change in the inventory.

With regard to other changes in an employer's program, it does not appear likely there would be many, if any at all. Written hazard communication programs usually include provisions such as who in the organization is responsible for implementing different parts of the program, or the type of in-plant labeling system used. The final HCS will not affect those provisions. OSHA does not believe that extensive revisions would have to be made to written programs, including the inventory, under the final rule.

OSHA did not propose any substantive modifications to the written hazard communication program, and it does not anticipate any significant new burdens associated with revising the program as a result of other modifications in the final rule.

While the written hazard communication program was mentioned several times in relation to the costs of compliance, or the burdens on small businesses, it was generally not discussed in a substantive way by rulemaking participants. The Building and Construction Trades Department of the AFL–CIO (Document ID #0359) expressed concerns about the challenges associated with implementation of the HCS on multi-employer worksites, a subject that is addressed in the written hazard communication program requirements. They suggested that the controlling employer on a site coordinate hazard communication activities. This is not a subject related to adopting the GHS, and no changes are being made to the rule to address it. The written program must address how the exchange of information will be accomplished, and that will continue under the final rule.

(f) Labels and other forms of warning. The HCS is designed to provide information through three different media: labels or other forms of immediate warning; safety data sheets; and training. Labels are attached to the container of chemicals, and thus provide the information that employees have the most ready access to in the workplace. Given that they are attached to containers, they are by necessity somewhat limited in the amount of information they can present. The labels provide a snapshot or brief summary of the more detailed information provided to employees in training programs, or available to them on safety data sheets. They are not intended to be a complete or detailed source of information on the chemical.

In the current HCS, the requirements for labels are performance-oriented. At the time the standard was promulgated, there were many different types of labels in use. A common label format used by industry was that provided by the ANSI Z129, Hazardous Industrial Chemicals—Precautionary Labeling standard. Employers following this format at the time provided a number of different types of information on the chemicals involved. However, there were two areas where employers were inconsistent or did not necessarily provide what was needed when following the national consensus standard. The first was provision of an identity on the label that could lead a chemical user to the specific chemical identities for the hazardous ingredients. It was common practice to provide a trade name for a product, but not the names of ingredients, on either the label or the safety data sheet. The second was provision of specific information on the hazards involved, such as the target organ affected.

The current HCS label provisions focus on this typically missing information. On shipped containers, chemical manufacturers or importers are required to include an identity, and appropriate hazard warnings, as well as their name and address or that of a responsible party. The term ''identity'' is defined in the current HCS definitions (paragraph (c)) as ''any chemical or common name which is indicated on the material safety data sheet (MSDS) for the chemical. The identity used shall permit cross-references to be made among the required list of hazardous chemicals, the label and the MSDS.'' The hazard warning is to provide specific information about the health or physical hazards posed by the chemical. The term is defined as ''any words, pictures, symbols, or combination thereof appearing on a label or other appropriate form of warning which convey the specific physical and health hazard(s), including target organ effects, of the chemical(s) in the container(s). (*See* the definitions for 'physical hazard' and 'health hazard' to determine the hazards which must be covered.)''

The current HCS similarly requires identity and appropriate hazard warnings for in-plant containers. OSHA has taken a flexible approach to in-plant labeling, allowing a wide variety of systems to be used as long as all of the required information is readily available to employees when they are in their work areas. Thus the current standard allows employers to continue to use systems such as the Hazardous Materials Information System (HMIS) and the National Fire Protection Association (NFPA) labeling systems that use numerical rankings of hazard.

The labeling provisions of the current HCS exemplify the overall performance orientation of the rule. They establish the basic information requirements for chemical manufacturers and importers, but do not specify a format, or any particular label elements to be used. As a result, labels are often quite different when the same chemical is addressed by different suppliers, creating the potential for employee confusion. While many manufacturers follow the ANSI national consensus standard, others do

not. Large manufacturers have frequently developed their own libraries or repositories of standard phrases, with decision logics for when to apply them to convey a hazard or a precaution. Therefore, not only does this approach lead to labels that are different, it also results in a large duplication of effort by chemical manufacturers developing their own systems.

This performance-oriented approach also did not lend itself to harmonization. Other countries often use more specific approaches, including assignment of standard phrases to certain hazardous effects, symbols, and other label elements. It was clear that the performance orientation of HCS, with its many acceptable varieties of labels, could not be standardized through agreement on content to achieve harmonization.

Given that a more specified approach would also lead to consistency among manufacturers, as well as helping to ensure the same message is received by all exposed employees, OSHA agreed to negotiate a harmonized approach that was more specific than the current standard. This was also agreed to by stakeholder representatives involved in the negotiations. Thus once a chemical is classified as to its hazard classes and corresponding categories, the GHS specifies exactly what information is to appear on a label for that chemical. As described in Part IV of this preamble, OSHA believes that these specific labeling requirements will be more protective of employee health and safety than the current performance-oriented standard.

The NPRM proposed more modifications for paragraph (f) than most of the other paragraphs of the existing standard. It changed the title of paragraph (f)(1) to indicate it addresses labels on shipped containers. OSHA also proposed adding a number of new types of information to the label: Product identifier, signal word, hazard statement(s), pictogram(s), precautionary statement(s), and the name, address, and telephone number of the chemical manufacturer, importer, or other responsible party. One commenter (Document ID #0520) proposed a different format for the requirements in paragraph (f). While OSHA appreciates the suggestion, the format followed by OSHA is dictated to a large extent by document drafting requirements of the **Federal Register**, and remains the same in the final rule. Commenters suggested that OSHA add the words ''where specified'' to paragraph (f)(1) because there are a few hazard categories that do not require all of the elements listed (for example, there may be no symbol required for the category (Document ID #0344, 0381, 0381, and 0393)). However, this concern is addressed in paragraph (f)(2), which states that the information has to be consistent with Appendix C. Therefore, the change has not been made. There was also a suggestion that the language in (f)(1) conflicts with the definition of label (Document ID #0353). OSHA reviewed both the paragraph language and the definition, and does not agree. Therefore, this change has not been made.

The final rule requires that labels on shipped containers contain much more information than required by the current standard. However, much of this additional information has already been included by manufacturers, particularly when following the ANSI standard for precautionary labeling. In addition, the OSHA requirements are intended to be the minimum information to be provided by manufacturers and importers. Under the GHS, as well as the current HCS and the final rule, chemical manufacturers and importers are free to provide additional information regarding the hazardous chemical and precautions for safe handling and use. The GHS and the final rule refer to this as supplemental information. Several commenters requested that this be permitted (Document ID #0132 and 0145). As has already been discussed above with regard to the definitions for hazard statements and precautionary statements, such additional information is permitted in Appendix C of the rule as long as it is accurate and does not conflict with the required label elements. Paragraph (f)(1) is adopted in the final rule as proposed except to provide clarity in light of OSHA deleting the requirement for labeling for hazards not otherwise classified. OSHA has modified paragraph (f)(1) to explicitly state that hazards not otherwise classified do not have to be addressed on container labels. Paragraph (f)(1) in this final rule now requires that chemical manufacturers, importers, or distributors ensure that each container of hazardous chemical leaving the workplace is labeled, tagged, or marked. Hazards not otherwise classified do not have to be addressed on the container. The paragraph also includes the information that the chemical manufacturer or importer must provide on the label, tag, or mark.

Paragraph (f)(2) of the proposal addressed labeling for unclassified hazards. As noted in the discussion on definitions, this has been changed to Hazards Not Otherwise Classified in the final rule. In addition to the change in the definition, OSHA has removed the proposed requirement for labeling unclassified hazards. Since there are no label elements in the rule to address these hazards, the Agency decided to cover them in a more limited fashion, and removed the requirement for labeling them from the final rule. Hazards not otherwise classified will still be addressed on the SDS.

Paragraph (f)(3) in the proposal elaborated the label requirements by stating that the required information would be taken from new Appendix C of the standard on Allocation of Label Elements, which incorporates the GHS labeling requirements. This Appendix specifies the signal word, hazard statement, pictogram, and precautionary statements for each hazard class and category. It also includes a few basic rules about preparing labels that address precedence of hazards and other topics. Thus once a hazard classification is completed, the chemical manufacturer or importer can refer to Appendix C to determine what information must be included on the label. Since paragraph (f)(2) of the proposal has been deleted from the final standard, paragraph (f)(3) of the proposal is now paragraph (f)(2) in the final rule. Each of the subsequent paragraph numbers have changed accordingly. New paragraph (f)(2) also requires that the label be prominently displayed, and in English (although other languages may also be included).

New paragraph (f)(3) requires the harmonized information to be located together on the label, tag, or mark. This paragraph has been adopted in the final standard as it was proposed.

The rest of paragraph (f) in the current standard remained largely the same in the proposed modified text, although conforming changes to terminology were made throughout the paragraph. The current standard's accommodation for labels associated with solid metal was maintained in the revised text, although OSHA has added a heading of ''Solid materials'' to it. The provision regarding conflicts with the requirements of DOT has also been maintained. In fact, since transport rules have been harmonized with the other sectors under the GHS, the possibility of a conflict in information is less likely when the HCS is consistent with the international approach. Two ANPR commenters specifically noted that OSHA should avoid conflict with DOT (Document ID #0064 and 0066). This is already addressed in paragraph (f)(5) in the final standard. NPRM commenters further noted that the exterior package should be for displaying DOT labels, rather than for OSHA labels (Document ID #0345). In general, this would be

true, although there are some cases where the single container serves as both the shipping container and the workplace container, such as drums. In these situations, there are rules in the GHS regarding which pictograms take precedence and the ways in which to display the information. These rules are set forth in Appendix C of the final standard.

The American Trucking Association (ATA) also raised the issue as to whether a GHS-compliant label might lead to a carrier's violation under DOT based on the carrier's ''constructive knowledge'' that a shipment contains a hazardous material (Document ID #0345). ATA suggested that OSHA and DOT need to work together to address this issue. OSHA contacted DOT and was told that this issue is addressed in 49 CFR 172.401, Prohibited Labeling. Specifically, GHS labels are exempted under 49 CFR 172.401(c)(5).

Under proposed paragraph (f)(7) (paragraph (f)(6) in the final rule), OSHA addressed workplace labeling. As noted previously, the current standard provides employers with flexibility regarding the type of system to be used in their workplaces. Some ANPR comments suggested that OSHA maintain this flexibility in the proposed standard (*See, e.g.,* Document ID #0047, 0145, and 0157). OSHA agrees, and the final rule retains the flexibility by indicating that the employer can choose to label workplace containers either with the same label that would be on shipped containers for the chemical under the revised rule, or with label alternatives that meet the requirements for the standard. It should be noted that while alternatives are permitted for workplace containers, the information supplied must be consistent with the revised HCS. Hazard classifications must be revised as necessary to conform with the final rule, and the other information provided must be revised accordingly to ensure the appropriate message is conveyed. Final paragraph (f)(7) remains the same as proposed.

OSHA did not propose to modify the remaining paragraphs on labels in the current HCS, including those that deal with alternatives to affixing labels to stationary containers; labeling of portable containers where the materials are transferred from a labeled container, used within a work shift, and under the control of the employee who performs the transfer; ensuring that all containers in the workplace have a label; a requirement for workplace labels to be in English and prominently displayed, while allowing the information to be in other languages as well; and the requirement for updating label information when there is new and significant information regarding the hazards of a chemical.

The only one of these provisions that received significant comment was the one regarding updating of label information within three months of receiving new and significant information regarding the hazards of a chemical. This provision ((f)(11) in the final rule) has been in the HCS since the 1994 revisions, but an administrative stay was placed on it shortly after it was promulgated in response to manufacturers' concerns. That administrative stay was never reconsidered or removed by OSHA, so the provision was not enforced. OSHA noted in the NPRM (74 FR 50283, Sept. 30, 2009) its intent to lift the stay, and requested comment and input on whether the time frame is appropriate. It should also be noted that an administrative stay is a tool available to OSHA to cease enforcement for reasons the Agency finds appropriate. It is not, as some appeared to assume, something that is adjudicated by an outside body, nor does it involve publication or documentation based on any type of record. It is usually a short-term solution to a problem that can be resolved through discussions with affected parties.

The current HCS requires that SDSs be updated within three months of learning of significant new hazard information, and that requirement has been enforced since the standard first went into effect in 1983. 29 CFR 1910.1200(g)(5). It is important to ensure that labels are similarly updated in a timely fashion, particularly since they provide the most immediate information in the workplace.

It appears that some commenters thought this provision was the effective date for updating the labels with the new GHS-aligned provisions (Document ID #0400, 0502, and 0513). This is not the case. Paragraph (j) of the final rule gives a much longer time period to implement the new GHS label requirements. Paragraph (f)(11), by contrast, addresses situations when a label must be changed because there is new and significant information about the hazards of the chemical. For example, there may be new studies that indicate an ingredient of the product is a potential carcinogen. This happens infrequently, so it is not anticipated that this provision would apply in many cases.

The key concern of commenters is what to do about stockpiles of chemicals that are already labeled. As noted by one commenter (Document ID #0370), new technology is available that links labels and SDSs, making new label generation more efficient. Stockpiles and distribution are now managed through computer programs that were not widely available in 1983. These programs can affect the amount of product kept in stockpiles, as well as the distribution of products in the supply chain, and thus the ability to deal with this updating issue. Consequently, a number of participants agreed that three months was an acceptable time frame (Document ID #0330, 0335, 0336, 0339, 0349, 0351, 0370, 0383, 0408, and 0410). Other commenters suggested that it was reasonable to allow sales to continue of products that are already labeled (Document ID #0313, 0323, 0327, 0328, 0329, 0344, 0351, 0361, 0375, 0377, 0381, 0399, and 0410). For example, Ecolab (Document ID #0351) stated:

> Ecolab agrees that three months for labels to be updated with significant changes to the hazards is acceptable. However, it would also be reasonable to allow the sell-through of product that is already produced and labeled. By three months, we agree new production of that product should occur with the significant new information, as long as existing date-coded inventory can be sold without modification. * * *

Others thought the administrative stay should be continued (Document ID #0353 and 0405). Of those who suggested alternative time frames, a number thought twelve months would be appropriate (Document ID #0328, 0352, 0372, 0376, 0382, 0399, 0402, and 0405). Others indicated three months was not enough (Document ID #0379); updating at some time interval is needed (Document ID #0365); six months would be the minimum (Document ID #0324, 0344, and 0361); or a range of six or seven to twelve months would be appropriate (Document ID #0411).

The North American Insulation Manufacturers Association (NAIMA) detailed some of the factors that influence the ability of a manufacturer to update a label: (1) Identification of the products whose labels need to be changed; (2) drafting new label language, which might require redesign of the packaging; (3) the ability to obtain new label or packing stock for printing; (4) the availability of printers to print the new material within the required time; (5) and transportation time for stock to the printer, from the printer to the manufacturer, and from the manufacturer through the supply chain (Document ID #411). NAIMA argues that many of these factors may be beyond the control of the manufacturer.

OSHA will not maintain the stay. It is necessary that labels be updated to

ensure that users have the appropriate information in a timely manner. OSHA is also not convinced that any difficulties in updating labels justify a full year's delay in providing significant new information. However, OSHA is persuaded that, in some cases at least, it may be difficult to update labels within three months. Thus, final paragraph (f)(11) allows six months to begin labeling shipped containers with the new information. As noted above, there are few situations where this provision will come into play. It is not related to every modification of the label, just those that are significant with regard to hazard information. Six months should be long enough to revise labels, and allow for the depletion of already labeled product. While some commenters discussed the need for global compliance associated with different labels (Document ID #0376), OSHA is only requiring domestic compliance within this time frame. Therefore, the provision is adopted in the final rule with a six-month time period for updating product labels when there is new and significant information about the hazards.

One commenter suggested that OSHA add a new requirement that importers, distributors, and employers inform the chemical manufacturer in writing, within three months, when they become aware of significant information about the hazards of a chemical (unless they have already received this information from the chemical manufacturer) (Document ID #0520). The HCS has always been designed on the premise that the chemical manufacturer is in the best position to know what information is available about the chemicals produced. This information is then to be disseminated downstream to distributors and users of the chemical. This suggestion would create a very extensive new burden on parties in the distribution chain who are not responsible for the chemical or the information regarding it as required under the GHS. It is not consistent with the approach in the rule, and is not the most effective and efficient way to identify and distribute information. Therefore, OSHA rejects this suggestion. However, downstream users are free to inform manufacturers of new hazards of which they learn, and OSHA encourages the sharing of such information.

A few commenters on the ANPR also argued that a small package exemption, or some type of prioritization of information on small packages, should be permitted (Document ID #0043, 0046, and 0080). The current HCS does not have such an exemption or limitation, but the Agency has allowed practical accommodations in enforcement policies for those situations where an issue has occurred. (*See, e.g., CPL 02–02–038*'' *Inspection Procedures for the Hazard Communication Standard:* ''CSHOs must consider alternate labeling provisions (for example, tags or markings) for containers which are of unusual shape or proportion and do not easily accommodate a legible label.'')

In Revision 3 of the GHS, some provisions regarding small package labels have been included (1.4.10.5.4.4, Labelling of small packagings). The competent authority is given the discretion to implement changes that allow label preparers to reduce the required information to accommodate a small package size. OSHA did not propose to adopt such a provision, and has retained its current approach regarding small packages in the final rule. Very small packages are less frequent in the workplace than in consumer settings, and it is difficult to argue that employees should get less information just because of the size of the package. The practical accommodation approach OSHA has been utilizing addresses those situations where there is a valid issue, and ensures that workers receive all of the required information.

Following the NPRM, further comments were received on the issue of labeling small packages. Some suggested that OSHA should provide clear guidance for small containers, including perhaps a suggested priority for the label information (Document ID #0313, 0327, and 0339). Others thought the manufacturer should be permitted to pick the most important hazard and precautionary statements to include on small packages (Document ID #0405), or that OSHA should use the GHS guidance on the issue (Document ID #0342). Particular problems were noted, such as labeling small containers for reference standards (Document ID #0342). Phylmar Regulatory Roundtable testified during the hearing, and suggested that OSHA should either establish a priority for information on a small package label, or clarify what is meant by practical accommodations (Document ID #0497 Tr. 113).

The guidance in the GHS (1.4.10.5.4.4) basically allows countries to introduce a consideration of risk by determining that small quantities of the chemical are not a concern, or that information may be omitted because of the small volume. This approach is not consistent with the HCS, or with the concept of right-to-know. It is also unacceptable to OSHA to allow manufacturers to decide which information is the most important. Essentially, all of the suggested solutions result in less information being available to exposed employees than other employees would receive when exposed to the same chemical packaged in a larger container.

The concept of practical accommodations is difficult to define, since it entails a judgment by OSHA staff when confronted with the details of a specific situation. The point, however, is to find a way to provide the required information in every situation, and not to start with the premise that the solution is to omit such information. Ensuring that workers receive the required information may be accomplished in ways other than simply attaching it directly to each small container. OSHA will examine the situation to make sure that the information is associated with the proper containers, and that it is complete. OSHA is not adopting any regulatory requirements for small packages, but will consider whether any additional guidance is needed as the standard is implemented.

While the GHS specifies the information to be placed on a label, it does not provide a specific format for placement, which is similar to current HCS requirements. At least one commenter noted that the GHS does not specify a location or size of core information on a shipment (Document ID #0066). OSHA believes that the performance-oriented approach of paragraphs (f)(3) and (f)(10) is preferable. The Agency will allow accommodations to be made as long as the information is located together, and is prominently displayed as required.

A number of commenters endorsed the overall approach or specific parts of the label requirements. Comments included adopting the GHS labels (Document ID #0324 and 0339), supporting the flexibility of the in-plant labeling (Document ID #0392), and the use of signal words (Document ID #0321). Others wanted to ensure that hazards are conveyed accurately to all levels of education in the work force (Document ID #0331); supported allowing other languages on labels (Document ID #0381); suggested OSHA should allow flexibility of format and placement of required label elements (Document ID #0405); and suggested that OSHA should follow Revision 3 of the GHS for label requirements (Document ID #0382). OSHA believes that the final standard incorporates all of these concepts.

Appendix C details how the specified label elements apply to each hazard class and hazard category. OSHA has made some modifications to the

introductory text to Appendix C regarding the combination of hazard and precautionary statements, and these modifications were discussed under paragraph (c), Definitions. Comments received regarding red border frames for pictograms, and making the precautionary statements mandatory, are also discussed above in the explanation of paragraph (c), Definitions. Also, as discussed in the explanation of that paragraph, OSHA has added definitions to the final standard for simple asphyxiant and pyrophoric gas. The Agency has also added a new section to Appendix C to provide the label elements for these hazards (C.4.30, Label Elements for OSHA Defined Hazards).

In C.2.1, ''Precedence of hazard information,'' addressing precedence of symbols, OSHA indicated that where the skull and crossbones is on a label, the exclamation point should not be included for acute toxicity. In the GHS, the statement simply says the exclamation point should not be included where the skull and crossbones is on the label. This is followed in the GHS by two other statements about not using the exclamation point for specific hazards when there is already a symbol for the more severe category of the same hazard. OSHA received a comment that the phrase ''where it is used for acute toxicity'' should be deleted since it is not in the GHS (Document ID #0393). OSHA believes that this phrase is appropriate for clarity and parallel construction with the other provisions of the paragraph. The skull and crossbones symbol only addresses acute toxicity, and does not convey other types of effects.

One commenter indicated that paragraph C.2.3.3 should not be mandatory (Document ID #0335). The paragraph indicates that when there is a DOT pictogram for a hazard on a label, an additional GHS pictogram for the same hazard must not appear. The reason it is mandatory is that having two different pictograms addressing the same hazard may lead to confusion for people handling the chemical.

OSHA also indicated that it was proposing to exclude ammunition and ammunition components under Division 1.4S from having the exploding bomb symbol and precautionary statements normally used for explosives (74 FR 50283, Sept. 30, 2009). This proposed exclusion was based on discussions during OSHA's rulemaking to update the explosives standard, and the issue of ammunition being sold in retail establishments. The Agency asked for input on whether the exclusion of the symbol was sufficiently protective, and whether any adjustments needed to be made. Several people thought the symbol should be included on ammunition and components since they are explosive (Document ID #0313, 0327, and 0328). However, others thought it was appropriate to treat ammunition and components differently, and that the exploding bomb does not represent the hazards of ammunition (Document ID #0330, 0336, 0338, 0370, and 0376). OSHA agrees with these commenters that the exploding bomb does not represent the hazards of ammunition, implying that there is a mass explosion hazard when handling these items, although that is not the case. Therefore, the Agency is maintaining the proposed provisions in the final standard, and will not be requiring a symbol or precautionary statements for ammunition and ammunition components.

A question was raised by the National Propane Gas Association (Document ID #0400) regarding signal words for propane if both simple asphyxiant and flammability hazards are covered since they have different signal words (warning and danger, respectively). Appendix C explains the precedence rules for signal words. Only one is ever required on a label. If one of the hazards warrants a ''danger'' signal word, then that will be the only one required on the label.

A few comments were also received about the interface of the new OSHA label requirements with the requirements of other agencies. For example, it was noted that it would be difficult to use one label to comply with both OSHA and CPSC (Document ID #0405), and that EPA and CPSC should accept GHS labels until they adopt the system themselves (Document ID #0328). OSHA does not have authority to determine the policies of other agencies with regard to accepting the new GHS-aligned labels. Another commenter noted that fireworks are regulated by other agencies, and therefore additional requirements are burdensome (Document ID #0355). The new OSHA requirements will be essentially harmonized with DOT's requirements, which will facilitate compliance with both agencies. Lastly, it was noted that OSHA should coordinate label implementation with Canada's Workplace Hazardous Material Information System (WHMIS) (Document ID #0461). As was noted earlier, OSHA does have bilateral discussions with Canada on implementation issues—however, Canada has not yet adopted the GHS or initiated implementation by regulation.

(g) Safety data sheets. The proposed revisions to this paragraph were confined primarily to paragraph (g)(2), other than conforming terminology regarding classification and SDSs. Paragraph (g)(2) of the current HCS indicates what information must be included on an SDS. It does not specify a format for presentation, or an order of information. Chemical manufacturers and importers have been free to use whatever format they choose, as long as the information is provided.

While this performance orientation was supported by chemical manufacturers when the standard was originally promulgated, it was largely based on the positions of those who were already providing SDSs and did not want to change their format. As the scope of the standard was expanded to cover other industries, it became clear that SDS users preferred a uniform order of information or a format. In particular, stakeholders such as emergency responders were concerned that information not being located in the same place on every SDS could create an increased risk in situations where the information was needed quickly.

Several years after the HCS was adopted, the chemical manufacturers themselves responded to these concerns by developing a national voluntary industry consensus standard that included a 16-section SDS (ANSI Z400, Hazardous Industrial Chemicals—Material Safety Data Sheets—Preparation). This consensus standard establishes the titles of each section and the order of presentation. It addresses concerns raised by also putting information of most use to those exposed in the beginning of the SDS, with the more technical data required by health and safety professionals in later sections. ANSI Z400 also responded to comments indicating that the SDS should be essentially ''one stop shopping'' in terms of information on a chemical, and should include other information such as how it is regulated by other Federal agencies, including transport requirements and environmental information by having sections for each of those categories of information.

In 1990, OSHA published a Request for Information (RFI) that addressed the issues of comprehensibility of labels and SDSs (55 FR 20580, May 17, 1990). Nearly 600 comments were received, and the majority of respondents sought an order of information or format for SDSs. Since the international harmonization process had begun at that point, OSHA thought it would be useful to wait until a globally harmonized SDS was available before changing the

requirements. However, through interpretation, OSHA has made clear for many years that the ANSI format is acceptable, as long as the SDS includes the required information (*See* CPL 02–02–038, ''Inspection Procedures for the Hazard Communication Standard'' (Mar. 20, 1998), the compliance directive for the HCS). As explained in Section IV of this preamble, OSHA believes that the implementation of a standardized SDS format will enhance hazard communication and be more protective of employee health than the current performance-oriented standard.

The 16-section format continued to be recognized in different countries and organizations over the years, including an International Labour Organization (ILO) recommendation on chemical safety, the European SDS requirements, and an International Standards Organization standard on SDSs. When the GHS was developed, it was decided that this 16-section format was already a *de facto* international approach, so it was adapted to be part of the GHS. One small change was made to reverse sections 2 and 3 so that hazard information comes before the chemical names of ingredients. This change has subsequently been adopted by ANSI and other groups to be consistent with the GHS.

Since the 16-section SDS was initiated in the U.S. by industry, many companies have been using it. This adoption by industry will reduce the impact of the harmonized GHS requirements. Others who continued to use different formats will need to change their SDSs to conform. There is already software available to assist in developing SDSs in the 16-section format, and it is expected that more tools will be available as the dates for SDS compliance approach.

OSHA proposed to modify paragraph (g)(2) to establish the section numbers and title headings of the sections of the SDS to be consistent with the GHS. Furthermore, a new Appendix D was proposed to be added to the standard to address safety data sheets, and it indicates what information must be included in each section.

As OSHA indicated in the ANPR and the NPRM, sections 12 through 15 of the SDS require information on subjects that are outside the Agency's jurisdiction (*See* the list of sections below). OSHA will not be making these sections mandatory for inclusion, nor will any enforcement activity be directed to these sections. However, inclusion of the sections in an SDS is not precluded, and they have been included in the text of the revised standard so people will be aware that a fully GHS-compliant SDS will have to address those areas in addition to the ones mandated by OSHA.

The revised SDS would require the following sections:

Section 1. Identification.
Section 2. Hazard(s) identification.
Section 3. Composition/Information on ingredients.
Section 4. First-aid measures.
Section 5. Fire-fighting measures.
Section 6. Accidental release measures.
Section 7. Handling and storage.
Section 8. Exposure controls/personal protection.
Section 9. Physical and chemical properties.
Section 10. Stability and reactivity.
Section 11. Toxicological information.
Section 16. Other information, including date of preparation of the last revision.

A note in the revised text addresses the other sections that are not mandatory for OSHA:

Section 12. Ecological information.
Section 13. Disposal considerations.
Section 14. Transport information.
Section 15. Regulatory information.

The remainder of the paragraph on SDSs remains the same as the current HCS. The final rule, like the proposal, retains the current HCS design, ensuring the downstream flow of information from the chemical manufacturer or importer to the distributor and ultimately the employer. Other provisions (completion of all sections of the SDS; provisions for complex mixtures; the requirement for information to be accurate and reflect the scientific evidence; the need to update the SDS when new and significant information is available; maintenance of SDSs so they are accessible to employees; accommodations for situations where employees travel between workplaces during a work shift; and access for OSHA and NIOSH) remain in this final standard as they are in the current standard, although they have been re-numbered.

As was the case with labels, relatively few comments were submitted in response to the ANPR or the NPRM on the specific provisions for SDSs. The final provisions are generally consistent with the current HCS, with the exception of the standardized approach described above that OSHA proposed and adopted in the final rule.

The only text changes that were made to the provisions that follow (g)(2) in the standard were to revise the terminology to be consistent with the new approach. However, there were some editorial suggestions for other changes (Document ID #0353). Consistent with OSHA's stated intent to not change anything that does not require change to align with the GHS, these suggestions have not been implemented in the final rule.

A number of rulemaking participants stated that they support the standardization of SDSs, and some noted that standardization would facilitate training (Document ID #0307, 0321, 0322, 0349, 0456, and 0463). It was suggested that OSHA update (g)(8) to (g)(10) to indicate that electronic distribution is acceptable (Document ID #0376 and 0395). It is already stated in (g)(8) that electronic access is acceptable for employees (although OSHA has removed ''microfiche'' from this provision since that technology is outdated and rarely used and in any event is captured under the broader term ''other alternatives,'' which is retained in the final rule). Electronic distribution is not precluded, although the employer on the receiving end of the information must be able to access it in that form. The general issue of electronic distribution and access is addressed in the compliance directive for the standard (CPL 02–02.038), and is based on recommendations made by the National Advisory Committee on Occupational Safety and Health (NACOSH). As explained in the directive, electronic distribution is permitted, but the appropriateness of its implementation will be judged as follows:

> MSDSs must be readily accessible and there must be no barriers to employee access during the work shift. The Agency interprets the term ''readily accessible'' to mean immediate access to MSDSs. The employer has flexibility to determine how this will be accomplished. The use of electronic means such as computers with printers, microfiche machines, the Internet, CD–ROMS, fax machines, etc., is acceptable. Employers using electronic means to supply MSDSs to their employees must ensure that reliable devices are readily accessible in the workplace at all times; that workers are trained in the use of these devices, including specific software; that there is an adequate back-up system for rapid access to MSDSs in the event of an emergency, including power outages, equipment, and on-line access delays; and that the system is part of the overall hazard communication program of the workplace. Additionally, employees must be able to access hard copies of the MSDSs, and in the event of medical emergencies, employers must be able to immediately provide copies of MSDSs to medical personnel. Mere transmission of the requested information orally via telephone is not acceptable.
>
> Employers may use off-site MSDS management services to meet the requirements of the HCS only if MSDSs are readily available to employees, either as hard copies in the workplace or through electronic means and as long as the provisions outlined

in the previous paragraph are ensured. Despite the use of an MSDS management service, the employer maintains primary responsibility for the hazard communication program, including receipt and use of the information to develop and implement a site-specific hazard communication program under paragraph (e) of the HCS.

When immediate access to paper or hard copy MSDSs does not exist, CSHOs should evaluate the performance of the employer's system by requesting a specific MSDS. Ultimately, the evaluation of an adequate system will rely on the professional judgment of the CSHO. Factors that may be appropriate to consider when determining if MSDSs are readily accessible include:

(1) Are the sheets or alternative methods maintained at a location and under conditions where employees can access them during each work shift, when they are in their work areas?

(2) If an electronic system is used for MSDS access (computer, fax, etc.) do employees know how to operate and obtain information from the system? (CSHOs should request an employee to retrieve MSDSs using the electronic system.)

(3) Was there an emergency/accident where immediate access was critical?

(4) How quickly did the employer respond to the employee's request?

Employees must have immediate access to MSDSs and be able to get information when they need it in order for an employer to be in compliance.

On multi-employer job sites, employers who produce, use or store hazardous chemicals in such a way that other employers' employees are exposed or potentially exposed, must communicate to other employers how the means of access to MSDSs will be accomplished.

Various suggestions were made for improvements to SDSs. For example, it was suggested that the SDS be limited to five pages (Document ID #0415); that a one-page, eighth-grade reading level summary of its contents should be provided (Document ID #0306); and that SDSs be written in plain and simple language (Document ID #0347). OSHA agrees that SDS preparers should try to ensure the SDSs are written clearly, and preparers should consider the audience in determining how the information may be best communicated. As originally designed by ANSI, the sections in the beginning of the SDS are intended to be written in plain language, with fewer technical terms where possible. This information should be of immediate use in emergency situations, and addresses information that exposed workers are most likely to need (summary of hazards for example). But many of the remaining sections of the SDS require technical information, and they are intended to be of use primarily to professionals designing protective measures or providing services such as medical surveillance to exposed employees. These sections need to retain their technical terminology in order to be useful to the professionals for these purposes. It is difficult to regulate those aspects of preparing documents that are intended to convey technical information, and no specific requirements of this type have been included in the final standard.

There was also a comment that the Superfund Amendments and Reauthorization Act (SARA) refers to material safety data sheets (*See 42 U.S.C. 11022),* and that changing the name to safety data sheets would violate the Paperwork Reduction Act (PRA)(Document ID #0350). Changing the references to the data sheet does not violate PRA or SARA. As is clear from the foregoing discussion, MSDSs under the current standard and SDSs under the final rule both serve the same function and communicate the same types of information. OSHA believes that an SDS under the final rule should be treated as an MSDS under SARA, but if the regulated community needs additional clarity, it can ask EPA to issue an interpretation to ensure there are no compliance issues. Similarly, because the change of the regulatory term from material safety data sheet to safety data sheet does not, by itself, create a paperwork burden, there are no PRA implications.

One commenter suggested that OSHA add to the SDS the date the chemical was produced, where chemical testing occurred to determine SDS data, and the manufacturer's Web site (Document ID #0346). OSHA rejects this suggestion, noting that the final rule does not require adding information to the SDS that would make it significantly different from the GHS harmonized information requirements. Furthermore, it would not be practical to require either the date the chemical was produced (which would result in a costly requirement to revise SDSs for every day the chemical was produced), or where chemical testing occurred (which may not be known, given that such information is obtained from many different sources, and studies do not frequently indicate where the testing occurred). However, suppliers are free to provide this information on their Web sites, and often do.

In the NPRM, OSHA noted that mixture safety data sheets could no longer be prepared by attaching multiple SDSs for the ingredients, but rather would have to be an SDS for the mixture as a whole (74 FR 50392, Sept. 30, 2009). One commenter (Document ID #0334) thought the multiple SDSs practice should continue to be allowed, particularly to minimize burdens for small businesses. OSHA believes that this approach is not in compliance with the GHS-aligned requirements. It also does not provide the best information for those downstream, including small business users.

New mandatory Appendix D, ''Safety Data Sheets,'' provides additional requirements for the information to be included under each section heading. The sub-headings used to indicate the additional information were lettered (*e.g.,* (a) product identifier used on the label, (b) Other means of identification, and so forth). Questions were raised as to whether the letters identifying each subheading were considered mandatory (Document ID #0382, 0376, and 0393). Apparently, the EU requires the subheadings to be numbered. OSHA does not consider the letters to be mandatory, but the information each subheading identifies is required to be included. A similar comment indicated that the format of Section 9, Physical and chemical properties should be clarified (Document ID #0339). No particular format is required. Appendix D simply requires that information responsive to that heading and its subheadings must be included. If applicable information is not available, the SDS must state so.

Another commenter indicated concern that Appendix D does not refer to ANSI Z400.1 or Annex 4 of the GHS (Document ID #0336). OSHA does not believe that reference to either of these documents is necessary since Appendix D is self-contained. As Appendix D is mandatory, those documents would have to be incorporated by reference to be referred to, and that is not necessary for purposes of compliance with the standard. However, both ANSI Z400.1 and Annex 4 would be useful references for SDS preparers since they provide additional guidance for completing an SDS.

In the final rule, a small modification has been made to the introduction to Appendix D to indicate that a subheading ''within a section'' needs to be marked when no relevant information is available. Also, OSHA has added column identifiers of ''heading'' and ''sub-heading'' to clarify what is being referred to by that terminology.

Additional comments were received on specific sections of the SDS. For example, in section 1, ''Identification,'' the American Chemistry Council wanted clarification of subheading (c), ''Recommended use of the chemical and restrictions on use'' (Document ID #0393). As explained in Annex 4 of the GHS, A4.3.1.3, the SDS preparer should ''provide the recommended or intended use of the substance or mixture,

including a brief description of what it actually does, *e.g.,* flame retardant, anti-oxidant, etc. Restrictions on use should, as far as possible, be stated including non-statutory recommendations by the supplier.'' Section 1 is adopted in the final rule as proposed.

On Section 2 of the SDS, ''Hazard identification,'' the Soap and Detergent Association argued that the requirement for precautionary statements in subheading (b) should not be included because they are not mandatory in the GHS (Document ID #0344). However, the GHS requires that precautionary statements appear on a label (1.4.10.5.2(c)), and Annex 4 (A.4.3.2.2) indicates that the GHS label elements, including precautionary statements, should be included in Section 2 of the SDS. As has already been discussed, OSHA is adopting the GHS precautionary statements, so they are mandatory for purposes of complying with this standard.

Other commenters questioned what was meant by ''unknown toxicity'' in Section 2, subheading (d) (Document ID #0367 and 0371). This term refers to the criteria for determining the acute toxicity of a mixture where there are ingredients that have no available acute toxicity data. In this case, the percentage of ingredients that have no data to consider in the calculations must be indicated in Section 2. In the final rule, OSHA has slightly modified sub-heading (d) to clarify this reference.

In addition to this clarification, two other changes have been made in Section 2. First, references to paragraphs (d) and (f) said ''paragraph (d)[(f)] of this section,'' which is the normal regulatory reference since the entire standard is called a ''section'' of the Code of Federal Regulations. However, since parts of the SDS under the ''Headings'' column are also referred to as sections, it was confusing. Section 2 now refers to the section number of the standard, 1910.1200. This change is tracked in other parts of Appendix D as well. Second, subheading (c) has been revised to refer to hazards not otherwise classified, rather than unclassified hazards, consistent with modifications to the regulatory text.

In Section 3, ''Composition/information on ingredients,'' commenters indicated that OSHA had left out a phrase that appears in the GHS with regard to identification of ingredients in a mixture (Document ID #0344 and 0393). This was an oversight, and OSHA has added the language ''and are present above their concentration limits/cut-off levels'' into Section 3. To ensure consistency with the classification criteria, OSHA has also clarified that ingredients that present a health risk below the cut-off/concentration limits would also need to be disclosed in section 3 of the SDS. It was also suggested that where the SDS discloses only the range of concentrations, the narrowest range possible should be permitted (Document ID #0395). Neither the GHS provisions for information on SDSs, nor the guidance for completing them, address specific limits for concentration limits. Under the current rule, concentrations of chemicals in a mixture are not required to be disclosed at all. OSHA agrees with the commenter that when SDS preparers use ranges rather than a specific percentage composition, the range must be limited in terms of the percentage concentration variation, and the variation in concentration must have no effect on the hazard of the mixture.

In order to help ensure that use of concentration ranges is understood, OSHA has added the term ''concentration'' in parentheses after the ''exact percentage'' terminology used in paragraph (i)(1) regarding trade secret protection. Similarly, the term ''exact percentage'' has been added in parentheses after ''concentration'' in Section 3 requirements for the SDS. These terms refer to situations where the mixture has a set formula, and the amount of a substance in the mixture is consistent from batch-to-batch. OSHA recognizes that there are some very small variances in this situation that have no impact on the hazard of the overall mixture. ''Exact percentage'' is the terminology used in the GHS guidance for preparation of SDSs, but these small variations or tolerances are expected and acceptable when reporting the anticipated percentage based on the formula.

Concentration ranges, rather than concentrations, may be used in other situations. For example, the final standard includes the longstanding provision that addresses the use of a single SDS for complex mixtures in paragraph (g)(4). Under this provision, where complex mixtures have similar hazards and contents (the ingredients are essentially the same, but the specific composition varies from mixture to mixture), one SDS may be used for all of these similar mixtures. Petroleum streams would be an example of a type of complex mixture to which this provision applies. In this situation, concentration ranges may be used for the ingredients that vary from stream to stream.

A chemical manufacturer or importer may also have a line of products that are very similar, but can be varied slightly in composition to meet the needs of customers. For example, toner colors may be changed by varying the amount of pigment. The variances are small, and the hazard remains the same. In these situations, concentration ranges may be used for multiple, similar products.

Trade secret status may be claimed for exact percentage composition but not for concentration ranges. Where a trade secret claim is made for exact percentage, the chemical manufacturer or importer may choose to provide a concentration range to assist downstream users in providing appropriate protections and, at the same time, potentially eliminating requests from users for disclosure of the trade secret in accordance with § 1910.1200. However, Section 3 must indicate that a trade secret claim is being made and information has been withheld.

Section 8 addresses exposure controls and personal protection. Some commenters noted that the information provided should have more detail than what was proposed in Appendix D, such as requiring information on specific PPE materials that provide protection (Document ID #0359 and 0456). OSHA agrees that SDS preparers should provide the most specific information available for the material so that the appropriate protective measures can be implemented. Annex 4 of the GHS, guidance for preparing the SDS, addresses the specific type of information on personal protective equipment that should be provided in Section 8 of the SDS in paragraph A4.3.8.3. OSHA will be making additional guidance available when the rule is implemented.

Section 8 also addresses inclusion of occupational exposure limits (OELs) on the SDS. Comments were received on inclusion of exposure limits on SDSs in response to the ANPR, and a number of different opinions were expressed, particularly regarding TLVs being required. Many ANPR commenters argued that TLVs should be included on the SDSs, as is currently required under the HCS (*See, e.g.,* Document ID #0042, 0179, 0021, 0038, 0124, and 0149). Others suggested they should not be required (*See, e.g.,* Document ID #0036, 0058, 0064, 0129, 0151, and 0163). A number of commenters suggested other types of occupational exposure limits that should be included on SDSs, such as levels from other countries, those recommended by NIOSH, and those recommended by the American Industrial Hygiene Association (*See, e.g.,* Document ID #0018, 0024, 0109, 0147, and 0171).

In the NPRM, OSHA proposed to maintain the requirement to include its mandatory permissible exposure limits

(PELs) on the SDSs, and to specify, as in the existing HCS, that manufacturers should include ''any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet.'' This would allow inclusion of any of the different types of occupational exposure limits commenters recommended for inclusion where the SDS preparer deems it appropriate. It also helps to minimize differences between the U.S. and other countries by not providing (except for PELs) a list of U.S.-specific occupational exposure limits that must be included, yet provides protection for employees by allowing inclusion of various recommendations that will help employers design appropriate protective measures. OSHA requested comment on this approach, and received many opinions from rulemaking participants.

First, many people agreed that the PEL should be on the SDS (although some acknowledged that they are out-of-date) (*See, e.g.,* Document ID #0328, 0330, 0332, 0336, 0338, 0339, 0340, 0341, 0344, 0349, 0351, 0352, 0354, 0357, 0359, 0375, 0379, 0382, 0399, 0412, and 0414). For example, the American Foundry Society (Document ID #0375) supported including the PEL, but thought other limits should only be included at the discretion of the SDS preparer:

> Our industry generally supports the requirement to include OSHA PELs, but not require the other recommended limits on SDSs. In particular, the American Conference of Industrial Hygienists (ACGIH)_TLVs, while able to provide useful information often lack credibility. As the result of a sometimes flawed development process, the TLVs can be misleading and their use can reduce clarity of communication. For certain materials, some manufacturers may choose to include TLVs on an SDS, or include other non-mandatory exposure values, including their own recommendations, but this should not be mandatory. The relevance of such other non-mandatory guidelines should be determined by the manufacturer who can best explain the meaning, context and limitations of such values.

Others specifically supported the approach proposed (*See, e.g.,* Document ID #0351, 0366, 0370, 0376, 0381, 0383, 0393, 0408, and 0411). Clariant Corporation (Document ID #0383) indicated they would support the proposed text, as well as a non-mandatory appendix listing other exposure limits:

> Clariant supports the recommendation to ''include other occupational exposure limits used or recommended''. Clariant would also support a non-mandatory appendix to the HCS to include reference to the TLVs and other occupational exposure limits such as the AIHA WEELs. Many companies already include other occupational exposure limits on their SDS. In most cases, those other limits are more up-to-date than the OSHA PELs.

The American Industrial Hygiene Association (AIHA) also suggested inclusion of a non-mandatory appendix listing other exposure limits such as the TLVs and WEELs (Document ID #0365).

Many commenters supported mandatory disclosure of applicable TLVs on the SDS in Section 8 (*See, e.g.,* Document ID #0313, 0315, 0317, 0319, 0323, 0327, 0328, 0330, 0332, 0336, 0340, 0347, 0349, 0353, 0354, 0357, 0359, 0401, 0403, 0410, 0412, 0413, 0414, 0463, and 0464). Others argued that inclusion of the TLVs would be inappropriate because such inclusion does not meet the Information (or Data) Quality Act, the development process is flawed, or they are non-governmental (*See, e.g.,* Document ID #0325, 0375, 0379, 0408, and 0409).

For example, the Center for Regulatory Effectiveness argued that OSHA's decision to require the disclosure of ACGIH TLVs on SDSs is inconsistent with the requirements of the Information Quality Act, Public Law 106–554, § 1(a)(3), Title V, § 515, 114 Stat. 2763 (2000). That act required OMB and DOL to issue guidelines ''ensuring and maximizing the quality, objectivity, utility, and integrity of information * * * disseminated by the agency.'' 44 U.S.C. 3516, note, at (b)(2)(A). Both OMB and DOL have issued such guidelines, and in addition OMB issued the ''Peer Review Bulletin,'' citing the authority of the Information Quality Act. OMB, *Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies,* 67 FR 8452 (Feb. 22, 2002) (hereafter ''OMB Guidelines''); DOL, *Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by the Department of Labor* (Oct. 1, 2002), found at *http://www.dol.gov/cio/programs/infoguidelines/informationqualitytext.htm* (hereafter ''DOL Guidelines''); OMB, *Final Information Quality Bulletin for Peer Review,* 70 FR 2664 (Jan. 14, 2005) (hereafter ''Peer Review Bulletin''). Each of these guidelines specifies certain steps an agency should take when engaged in the ''dissemination'' of ''information.'' OSHA does not believe that it is disseminating ''information,'' as defined by these documents, in requiring disclosure of TLVs on SDSs.

All three documents except from the definition of information ''opinions, where the agency's presentation makes it clear that what is being offered is someone's opinion rather than fact or the agency's views.'' (OMB Guidelines V.5; DOL Guidelines at 5, 13–14; Peer Review Bulletin I.5.) OSHA understands this to mean that the guidelines do not apply unless the public could reasonably understand the information being disseminated as the official view of the agency. This understanding is supported by a number of statements by OMB and DOL. In the preamble to the Peer Review Bulletin, for example, OMB states that ''[a]n information product is not covered by the Bulletin unless it represents an official view of one or more departments or agencies of the federal government.'' 70 FR at 2667/2. Likewise, DOL's guidelines do not apply to information ''clearly represented as opinion and not an official agency or Departmental representation.'' DOL Guidelines at 3. Hyperlinks on an agency's Web site to information on non-governmental Web sites are not an agency dissemination of information, nor is a private researcher's publication and communication of the results of a government-funded study, where an appropriate disclaimer appears. OMB Guidelines V.5; 67 FR 8454/1; DOL Guidelines at 5, 13–14.

Users of hazardous chemicals could not reasonably think that ACGIH TLVs listed on an SDS are OSHA's dissemination of information as to the correct or feasible level of exposure to the chemical. As explained on the ACGIH Web site, TLVs are the ACGIH's statements of ''scientific opinion'' (Document ID #0529). The SDS is prepared by the manufacturer and represents the manufacturer's understanding of the hazards of the chemical, the appropriate conditions of use, and the necessary protective measures to be employed. It is hard to see, in that context, how a user of the SDS could understand that the TLVs listed on the SDS represent information disseminated by OSHA. The TLV will be identified as such on the SDS. Indeed, in the many cases where there is an applicable OSHA PEL, the PEL will also be listed in addition to the TLV.

Further, if TLVs are ''information'' for purposes of the IQA, then so too is everything in the SDS. If that were true, it would render the approach of the HCS unworkable because it would require OSHA to review and approve every manufacturer's label and SDS. OSHA does not believe Congress intended such a result in enacting the IQA.

The Center for Regulatory Effectiveness and the AFL–CIO's Building and Construction Trades Department suggested that OSHA could

require SDS preparers to add a statement to the SDS saying that the TLV does not represent OSHA's view of a safe level (Document ID #0325 and 0644). OSHA has decided against such an approach. First, as explained above, OSHA does not believe that a reasonable SDS user would understand the TLV to be OSHA's official representation. Second, such a disclaimer could cause confusion, creating the incorrect impression that the remainder of the information on the SDS does represent OSHA's official representation about the hazards of the chemical in question.

There are other reasons the IQA guidelines do not apply here. The OMB and DOL guidelines only apply to information ''first disseminated after October 1, 2002'' (OMB Guidelines III.4; DOL Guidelines at 2), and OSHA has required TLVs to be disclosed on MSDSs since 1983. Moreover, the guidelines are ''not intended to impose any binding requirements on DOL or the public or * * * to provide any right to judicial review'' (DOL Guidelines at 2). Rather, ''information quality [is] an important management objective.'' (*Id.*) Courts have accordingly rejected private attempts to force agency compliance with the data quality guidelines. *See, e.g., Salt Institute* v. *Leavitt,* 440 F.3d 156, 159 (4th Cir. 2006) (IQA ''does not create a legal right to access to information or to correctness''); *Single Stick, Inc.* v. *Johanns,* 601 F. Supp. 2d 307, 316 (D.D.C. 2009) (same), *aff'd in relevant part on other grounds sub nom Prime Time Int'l Co.* v. *Vilsack,* 599 F.3d 678, 686 (D.C. Cir. 2010). Likewise, the Peer Review Bulletin is ''intended to improve the internal management of the executive branch, and is not intended to, and does not, create any right or benefit, substantive or procedural'' enforceable against the federal government (Peer Review Bulletin XII). OSHA finds that the DOL and OMB Guidelines and the Peer Review Bulletin do not require the Agency to take the additional step of analysis before requiring the disclosure of TLVs on safety data sheets.

At least one commenter suggested that requiring disclosure of the TLV would violate the Administrative Procedure Act's notice and comment requirements, to the extent that the SDSs were required to disclose TLVs that the ACGIH might adopt after the final rule is published (Document ID #0361). That contention was rejected in *National Ass'n of Manufacturers* v. *OSHA,* 485 F.3d 1201, 1204 (D.C. Cir. 2007), where the court held that the hazard communication standard does not prescribe particular chemicals for which hazard communications are required, but rather a system by which manufacturers and the ACGIH evaluate and communicate chemical hazards. This system is not changed when the ACGIH modifies a TLV, and therefore no new notice and comment is required. *Id.* Nor is OSHA impermissibly delegating its authority to the ACGIH by requiring that TLVs be listed, as argued by the National Association of Home Builders (Document ID #0372). The Third Circuit rejected that argument in a challenge to the current standard, which also required that manufacturers and importers perform hazard determinations for all chemicals for which the ACGIH had published TLVs. *Associated Builders and Contractors* v. *Brock,* 862 F.2d 63, 68 (3d Cir. 1988). The final rule's requirement to list nonbinding TLVs is an *a fortiori* case.

Finally, a number of commenters expressed concerns about the procedures ACGIH uses in adopting TLVs (Document ID #0083, 0084, 0361, 0371, 0372, and 0529). Typical of these is the comment from the Independent Lubricant Manufacturers Association:

> TLVs are developed by way of ACGIH committees that operate in secret with *anonymous* authors. Though the opportunity to provide written comments exists, there is no ''appeal'' process to challenge, question or even engage in a professional discourse with the people responsible for developing and finalizing the TLVs. ILMA believes that because the TLV development process is closed, TLVs have compromised scientific value and limited utility in addressing occupational health and safety matters. Indeed, this non-consensus process can generate defective decisions that have the potential to compromise the health and safety of the very workers the TLVs are designed to help. In addition to issues of transparency and fairness, TLVs are developed without any regard to the economic and technical feasibility of its recommendations or the availability of acceptable methods to determine compliance.

(Document ID #0371 (emphasis in original)). Other commenters also objected to the fact that the ACGIH provides no public hearing, that the extent of review ACGIH committees devote to TLV recommendations before adopting them is unclear, and that TLVs are not ''consensus standards'' within the meaning of the OSH Act (Document ID #0372 and 0529).

As explained on its Web site, ACGIH TLVs ''represent conditions under which ACGIH believes that nearly all workers may be repeatedly exposed without adverse health effects. They are not fine lines between safe and dangerous exposures'' (Document ID #0529). TLVs are to be used by industrial hygienists in determining safe exposures in workplace, according to the ACGIH, but ''are only one of multiple factors to be considered in evaluating specific workplace situations and conditions.'' (*Id.*)

The record evidence shows that the ACGIH uses a reliable and open method to develop TLVs with ample opportunity for public input. ACGIH TLVs are set by the Threshold Limit Value Chemical Substances Committee (Document ID #0536). Members of this committee are chosen for their expertise in industrial hygiene, occupational medicine, epidemiology, toxicology, or related fields such as statistics or chemistry, and members are selected to maintain a balance between these specialties. (*Id.*) Membership preference is given, among other things, to those with 10 or more years experience and advanced degrees within their field. (*Id.*) A majority of committee members must be ''Regular'' ACGIH members, that is, those occupational hygiene, occupational health, environmental health, or safety professionals whose primary employment is with a government agency or an educational institution. (*Id.; See also http://www.acgih.org/Members/memdescrip.htm.*)

The ACGIH has a conflict of interest policy, requiring that members disclose, both orally and in writing, ''potential, real, or perceived conflict[s] of interest'' with respect to a substance under consideration (Document ID #0536). The Committee chair is required to conduct a conflict of interest presentation annually, and Sub-committee chairs will typically inquire at the beginning of meetings as to whether members' conflict status has changed. (*Id.*) Where conflicts arise, the steps to be taken—such as recusal, abstention, or disclosure—are decided based on the nature of the conflict involved. (*Id.*)

Once the relevant ACGIH sub-committee decides to consider a new TLV, it is included on an ''Under Study'' list that the ACGIH publishes each February 1. (*Id.*) Each July 31, that list is updated to indicate the substances for which the ACGIH anticipates issuing a ''Notice of Intended Change'' in the coming year. (*Id.*) An author is assigned to prepare a draft ''documentation'' supporting a proposed new TLV; the author or ACGIH staff must conduct a full literature search on the substance; and only published, peer-reviewed data may be relied upon in the documentation. (*Id.*) The ACGIH has detailed guidelines governing the content of documentations and the method of conducting literature searches. (*Id.*) Once the draft documentation is approved by a sub-

committee (by consensus) and the full TLV committee, ACGIH issues a public Notice of Intended Change and makes the draft documentation available to the public for at least a year to submit comments. (*Id.*)

The author and the sub-committee review the public comments received, and the draft documentation is amended if necessary. (*Id.*) Once the sub-committee reaches consensus, the draft documentation is forwarded to the full committee with a proposal to (1) retain the current TLV and publish the draft documentation for comment for an additional year; (2) change the TLV but publish the draft documentation for comment for an additional year; (3) adopt the proposed TLV and draft documentation; or (4) withdraw the proposal. (*Id.*) The proposal is then voted on by the full committee, and then the committee's recommendation is sent to the ACGIH board of directors for ''ratification.'' (*Id.*) Generally ACGIH does not hold meetings with interested parties during this process, but its rules allow for public discussion of the evidence on a chemical's hazard at ACGIH-sponsored symposia, and allows for meetings where new evidence has been developed and is ''essential to the Committee's deliberations.'' (*Id.*)

NIOSH, the Kentucky Labor Cabinet, the American Industrial Hygiene Association, the American Society of Safety Engineers, the Alliance of Hazardous Materials Professionals, and several occupational safety and health consulting firms support the TLV requirement, stating that ACGIH TLVs are useful in developing health and safety programs and are widely used in industry (Document ID #0313, 0323, 0327, 0336, 0354, 0365, 0410, 0412, 0496, and 0521). A number of manufacturers and manufacturer associations also support the TLV requirement (Document ID #0328, 0330, 0332, 0353, 0413, and 495). The International Chemical Safety Cards, prepared under the auspices of the UN, list TLVs (Document ID #0497). TLVs are currently required to be disclosed under the HCS, and witnesses testified that failure to include TLVs on SDSs in the final rule would render the standard less protective of worker health because TLVs are more up to date and cover more substances than OSHA's PELs (Document ID #494 Tr. 28–29, 94; Document ID #496 Tr. 368, 382).

Based on this record, OSHA finds that commenters' objections to TLVs are without merit. TLVs are set through an open process with ample opportunity for public input through the comment and symposium process; the fact that the ACGIH does not hold public hearings on proposed TLVs does not undermine the fairness of the process. While OSHA agrees that TLVs do not address feasibility concerns, it finds that TLVs are useful information for employers and employees to use in evaluating the hazards presented by chemicals used in their workplaces. OSHA finds that the record does not support the contention that TLVs have ''compromised scientific value'' because of the process used by the ACGIH. Each TLV is supported by a documentation explaining the evidence and assumptions on which it relies; these documentations are subjected to public comment and approved at several levels within the organization. It is certainly possible that a manufacturer or importer might disagree with the scientific judgments embodied in a TLV, but the final rule allows them to set forth their own recommendations about an appropriate exposure level on the SDS. Based on the ACGIH's procedures and the evidence of TLV use by industry, occupational safety and health professionals, and NIOSH, OSHA reaffirms its position that, in general, TLVs provide useful information that should be disclosed to employers and employees using hazardous chemicals.

Some commenters supported requiring other limits to be on the SDS in addition to the TLVs, such as the NIOSH Recommended Exposure Limits (RELs); the AIHA Workplace Environmental Exposure Limits (WEELs); and the German maximum allowable concentrations (MAKs) (*See, e.g.,* Document ID #0323, 0330, 0336, 0340, 0349, 0354, 0357, 0359, 0401, 0410, 0412, and 0414). NIOSH recommended broad inclusion of available occupational exposure limits (Document ID #0412):

> Providing occupational exposure limits (OELs) helps workers and employers understand the relationship between exposure concentration and adverse health effects. NIOSH supports the requirement of including PELs on the SDSs and further suggests that OSHA consider adding additional exposure limits, whenever available, such as NIOSH recommended exposure limits (RELs), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs), American Industrial Hygiene Association (AIHA) Workplace Environmental Exposure Limits (WEELs), and German maximum allowable concentrations (MAKs) * * *.

There were a number of other comments on the issue of exposure limits in Section 8 of the SDSs, such as asking for an explanation of ''any other exposure limit used or recommended'' by the SDS preparer (Document ID #0329, 0351, 0382, 0381, and 0393), including whether this means exposure limits from other countries. There was also a suggestion to delete ''used or'' from the requirement (Document ID #0339). This language is in the current HCS, and is intended to include any exposure limits developed by the producer to protect their own employees, as well as other exposure limits commonly available such as the TLV or REL. It may also include exposure limits from other countries, but there is no intent to require that every known exposure limit in the world be provided. OSHA does not agree that it is appropriate to delete ''used or'' since companies often have exposure limits to protect their own employees, and this information can help their customers to determine what is needed to protect downstream employees as well. Others thought inclusion of exposure limits in addition to the PELs would confuse small businesses (Document ID #0372), or be detrimental to harmonization (Document ID #0464).

The AFL–CIO summarized their view of the record on this issue, as well as that of other worker representatives, in their post-hearing brief (Document ID #0645):

> We believe that OSHA needs to issue a final rule that restores the requirement to list the TLV on the SDS and strong record evidence supports our position. There is broad support for this position, covering a wide range of organizations including NIOSH (Ex. 0412.1) unions (AFL–CIO, Ex. 340.1; Building and Construction Trades Department, Ex. 0359.1; and the Steelworkers, Ex. 0403.2); safety and health professional associations (American Society of Safety Engineers, Ex. 0336.1); employers and their representatives (Dow Chemical Company, Ex. 03353.1); Patton Boggs, Ex. 0413.1); and individual experts (Adam Finkel, Ex. 0401.1; Harry Ettinger, Ex. 0319.1).

In Section 8 of the SDS in the final rule, OSHA has included the language used in the current rule to describe what exposure limits are to be addressed: ''OSHA permissible exposure limit (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available.''

As noted in the NPRM, OSHA took the reference to TLVs out of Section 8 of the SDS in the interest of limiting country-specific deviations from the GHS. However, based on many comments in the record, OSHA has concluded that the TLVs provide useful information for those designing

protection programs for employees exposed to the chemicals involved, and are already widely used and applied for that purpose in American workplaces, as well as around the world. Referencing TLVs on the SDSs does not make them mandatory or establish them as control guidelines. It simply provides additional information that can help employers determine the proper levels of protections in their workplaces.

With regard to the recommendations for other exposure limits to be included on the SDS, OSHA agrees that referring to those exposure limits could also be useful, and would encourage SDS preparers to include them where available. However, the Agency is still concerned about including additional country-specific deviations, especially for limits that are less available than the TLVs. Providing too many different exposure limits may also be confusing to employers. Publication of a non-mandatory appendix would require OSHA to continually update it, as these different lists are prepared by various organizations. Since the Code of Federal Regulations is only updated annually, the Appendix would always be out-of-date. We do not believe this would be helpful in the long term, and that resources would be better put to other purposes than updating a non-mandatory appendix.

In the NPRM, OSHA did not propose to continue to require specific mention of IARC, NTP, and OSHA as sources of determinations regarding carcinogenicity. The requirement to consider these sources definitive in terms of a carcinogen determination was not included in the NPRM since it was not part of the GHS approach. However, as was discussed above, OSHA has modified Appendix F to allow classifiers to use these sources when assessing carcinogenicity, rather than applying the criteria to the data themselves. In order to facilitate this, OSHA has provided a table in Appendix F that aligns the GHS criteria with those of IARC and NTP. In addition, OSHA has decided to retain the requirement to include this information on the SDS in Section 11. This information will be of use to classifiers, as well as to employers and employees, when ascertaining potential hazards and determining appropriate control measures. This was supported by some commenters (*See, e.g.,* Document ID #0321, 0335, and 0403), while others argued that the determinations of such organizations should not be included because of issues with their process of making determinations (*See, e.g.,* Document ID #0379, 0417, and 0529). OSHA believes that this information from organizations that are recognized as expert in the field of carcinogenicity will continue to be helpful to both classifiers and users of chemicals, and does not agree with the commenters who argue about the process followed to make such determinations. The arguments were similar to those discussed above regarding inclusion of TLVs on SDSs, and OSHA's response to such arguments apply here as well. OSHA finds that both IARC and NTP use reliable procedures and criteria in making their determinations.

OSHA indicated in the NPRM that Sections 12 through 15 of the SDS were not going to be mandatory since they involved information that is outside OSHA's jurisdiction. With regard to Section 12 on environmental effects, some commenters expressed concern about the lack of harmonization with trading partners on environmental issues, or suggested that OSHA should work with EPA on this issue (*See, e.g.,* Document ID #0351 and 0377). OSHA and EPA have discussed this issue, and EPA's Office of Chemical Safety and Pollution Prevention will be updating applicable Toxic Substances Control Act (TSCA) regulations consistent with modifications made in this **Federal Register** Notice. Dates will be published in the Unified Regulatory Agenda (*www.reginfo.gov*). As noted previously, OSHA encourages SDS preparers to complete Section 12, as well as Sections 13 through 15, so as to have an SDS that is compatible with other international requirements, as well as ensuring customers have complete information.

Similarly, comment was received suggesting that Section 14 on transport information should be required, and producers should indicate whether the product is, or is not, covered by DOT's Hazardous Material Regulations (Document ID #0345). While OSHA does not have authority to require this to be included in Section 14, we certainly agree that it would be useful information for users of the chemical, and encourage producers to complete Section 14.

In the final rule, non-mandatory Section 15 of the SDS is intended to provide other regulatory information. OSHA raised as an issue for comment whether this section should be made mandatory by requiring regulatory information on OSHA's substance-specific standards be included in it. Employers can, of course, voluntarily list information about other OSHA standards (Document ID #0376), but voluntarily provided information is not subject to enforcement. Many of the respondents commented that Section 15 should not be made mandatory (*See, e.g.,* Document ID #0324, 0335, 0344, 0352, 0353, 0355, 0370, 0372, 0376, 0377, 0379, 0381, 0385, 0393, 0399, 0402, 0405, and 0408). Some questioned whether information about substance-specific standards would be useful to users of the SDS (*See, e.g.,* Document ID #0329, 0335, 0372, and 0405). Others thought that OSHA should require the substance-specific standards to be indicated, and that Section 15 should thus be mandatory (*See, e.g.,* Document ID #0328, 0330, 0336, 0338, 0339, 0340, 0347, 0349, 0351, 0354, 0357, 0365, 0383, 0389, 0403, 0410, 0414, and 0453).

While OSHA agrees that there is merit in including the substance-specific standards in Section 15 to inform chemical users of their existence and applicability, it is difficult to make completion of Section 15 mandatory since there is likely to be considerable other information in the section that would not be enforceable by OSHA. Having a section that includes both mandatory and non-mandatory information is potentially confusing to the regulated community. Additionally, the PELs will already be indicated in Section 8, and will thus inform the user when there is a substance-specific standard of concern. Therefore, while OSHA encourages additional information in Section 15, it remains non-mandatory in the final rule.

One suggestion received for Section 16 indicated that the preparer should identify the exact changes made to the SDS when revising it so the user can determine if re-training is needed (Document ID #0469). Presumably, the user would review the changes to decide whether re-training is needed. However, the success of such an approach would depend on how often the chemical is purchased, and a new SDS is received. If the chemical has not been purchased for a while, and a new SDS only indicates what changes have been made since the last update, the user could have missed versions of the SDS in the interim, and thus would not know all of the changes that had been made since the last SDS was received. In addition, adding such a requirement would make the OSHA provisions internationally inconsistent.

(h) Employee information and training. The GHS does not include harmonized training requirements, but does recognize the important role that training plays in hazard communication. For example, 1.1.3.1.3 of the GHS states:

> In the workplace, it is expected that all of the GHS elements will be adopted, including labels that have the harmonized core information under the GHS, and safety data

sheets. It is also anticipated that this will be supplemented by employee training to help ensure effective communication.

OSHA agrees that training is key to ensuring effective hazard communication. Under the current HCS, training is used to explain the label and SDS systems used in a workplace, and to address the hazards of chemicals and protective measures. While the written information provided is clearly important, training is an opportunity to explain the data and helps to ensure that the messages are being received accurately so they can be acted on appropriately. (*See* Section IV of this preamble.)

The training provisions in the HCS do not need to be modified to be consistent with the GHS since it does not include such requirements. However, OSHA proposed small revisions to track terminology used in other paragraphs, as well as to clarify the requirement to train on the details of the hazard communication program in (h)(3)(iv). While training on the program has always been required in the HCS, OSHA believed that modifying the text slightly would convey the need to address both the labels that will arrive on shipped containers, as well as any workplace-specific system that the employer uses. In addition, the training on SDSs must include the order of information. The final rule requires that training include the details of the hazard communication program developed by the employer, including an explanation of the labels received on shipped containers and the workplace labeling system used by their employer; the safety data sheets, including the order of information and how employees can obtain and use the appropriate hazard information.

OSHA proposed that employers train or re-train employees regarding the new labels and safety data sheets within two years after the rule is promulgated. The Agency believes that the training needs to be completed by the time employees begin to see labels and safety data sheets with the new information on them, rather than waiting until after the transition has been completed.

Some commenters to the ANPR noted that training would be required to ensure employees understand, in particular, the symbols and pictograms that will be used on labels. Some argued that the burden would be substantial given that all training would have to be revised, and the time and resources required would be significant (*See, e.g.,* Document ID #0153 and 0178). However, many agreed that having a standardized approach to labels and SDSs will make training easier in the future than training under the current rule where chemical manufacturers and importers can use whatever formats they choose (*See, e.g.,* Document ID #0030, 0042, 0072, and 0077).

Marshfield Clinic (Document ID #0028) noted that communication of information about chemicals and other hazardous substances:

> * * * is one of the more difficult to get across to workers. It is very appreciated that OSHA is revisiting this. Standardization will greatly assist in giving workers a better understanding of the hazards they may encounter when working with chemicals and other hazardous substances.

Similarly, Alcoa (Document ID #0042) suggested: ''A standardized format will simplify hazard communication training and the use of pictograms will alleviate some of the problems presented by poor language skills.''

There were a few commenters who argued that the standardized approach either would not simplify training, or they did not know if it would (*See, e.g.,* Document ID #0065 and 0078). Another noted that the current approach is fine for companies that are domestic only (Document ID #0026).

The majority of the comments made on the training provisions suggested additions to the existing requirements to further specify what is expected, and to improve the training. These comments were submitted primarily by worker representatives, or by the National Institute of Environmental Health Sciences (NIEHS) (*See, e.g.,* Document ID #0340, 0347, 0349, 0357, and 0403). For example, the Communication Workers of America (CWA) (Document ID #0349) suggested:

> * * * Given the significance of education and training, OSHA should develop a mandatory appendix to the Proposed Rule that sets forth the elements (including an evaluative component) of an acceptable education and training program.

As noted above, OSHA agrees with these commenters that effective training is a key part of hazard communication. While the GHS does not include such requirements, the developers also recognized the importance of including training in national programs, and encouraged countries to do that. In addition, the United Nations Institute for Training and Research (UNITAR), which is the international focal point for capacity building on the GHS, is developing training courses to be made available to developing countries, in particular to assist them in adopting the GHS.

As described, OSHA proposed a slight modification to ensure that employers are aware that they need to train specifically on the new label elements and SDS format. This modification is in the final rule, and the training on these aspects is to be completed prior to other provisions going into full effect. OSHA does not agree that other changes should be made to the training provisions of the HCS at this time. As also indicated in this document, the changes to the HCS being promulgated are focused on what is necessary to comply with the GHS. Since the GHS does not have any training requirements, the modification proposed and adopted by OSHA is what is necessary to ensure appropriate compliance with the revised standard, and does not introduce any new approaches or requirements.

OSHA is planning to provide additional guidance to help ensure appropriate training is conducted when complying with the revised HCS. A draft Model Training Program was posted for comment on OSHA's Web page some years ago. It includes many of the concepts addressed in the comments received, but was never finalized. While it was designed to provide an array of tools from which employers could choose what they needed based on their workplaces (lesson plans and slides), there were comments received at the time that it was too long for small employers. OSHA believes that the model program includes important information about conducting appropriate training (which was also the view of other commenters on the program). It is being revised and updated to be consistent with the revised rule, and will be made available on OSHA's Web page. A shorter guidance document for small employers is also being developed.

In addition to these training-specific tools, OSHA has other tools under development that could be used in training (*e.g.,* a quick card with the new symbols). These too will help to address some of the issues that have been raised.

Based on the above reasons, the final rule adopts the training provisions in the proposal. OSHA will address other comments provided through guidance and compliance assistance materials, rather than through further revisions to the rule.

OSHA has made minor changes to the training provisions to reflect the new definition of hazardous chemical in the final rule. In (h)(1), OSHA is replacing the phrase ''new physical or health hazard'' with the broader term ''chemical hazard.'' Final paragraph (h)(1) requires that employers provide employees with effective information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new chemical hazard the employees have not

previously been trained about is introduced into their work area. Information and training may be designed to cover categories of hazards (e.g., flammability, carcinogenicity) or specific chemicals. Chemical-specific information must always be available through labels and safety data sheets.

Similarly in paragraph (h)(3)(ii), OSHA is replacing the phrase ''The physical and health hazards'' with all of the hazards identified as well as the hazards not otherwise classified. Final paragraph (h)(3)(ii) requires that the training include the physical, health, simple asphyxiation, combustible dust, and pyrophoric gas hazards, as well as hazards not otherwise classified, of the chemicals in the work area. This change was necessary because the final rule covers simple asphyxiants, pyrophoric gas, combustible dust, and hazards not otherwise classified, in addition to what falls under the new definitions for physical and health hazards. The modification to paragraph (h)(3)(ii) requires employers to train employees on all of the chemical hazards in the workplace, rather than only physical and health hazards as defined in the final rule.

(i) Trade secrets. The current HCS includes provisions that define what can be considered trade secret information under the rule, as well as delineate the conditions under which this information must be disclosed to ensure the safety and health of exposed employees. These provisions were a significant focus of the original rulemaking on the HCS, and reflect the common law of the United States on this topic. In the years since the rule has been in effect, however, this issue has not been as important. Overall, since these provisions were promulgated, it appears that fewer claims of trade secrecy have been made, and fewer requests for trade secret disclosure have been received, than were anticipated during the original rulemaking process.

The negotiations for development of the GHS recognized at the outset that trade secrets—generally referred to internationally as confidential business information—would be an issue of concern. Guiding principles included the following (*See* 1.1.1.6(j) of the GHS):

> In relation to chemical hazard communication, the safety and health of workers, consumers and the public in general, as well as the protection of the environment, should be ensured while protecting confidential business information, as prescribed by the competent authorities.

As the issue was considered further, it was recognized that laws regarding confidential business information were very much country-specific, and had a broader context than rules for classification and labeling. Such laws could not be modified or harmonized through the process of harmonizing classification and labeling. Thus it was determined that the GHS would recognize the importance of trade secrets, and provide principles for countries to follow when adopting the GHS. These principles are consistent with the approach already incorporated into the HCS.

The type of information that can be considered confidential or trade secret is limited to the names of chemicals and their concentrations in mixtures. Under the current HCS, OSHA did not require that concentrations in mixtures be disclosed, and thus limited trade secret claims to specific chemical identities. This was the primary difference between the current rule and the proposed revisions to the HCS. To be consistent with GHS, OSHA proposed to add percentage composition information to the SDS. This introduces the possibility that trade secret claims will be made for this type of information, as well as specific chemical identities. Thus the proposal revised the text of the current rule to add consideration of percentage composition everywhere specific chemical identity is addressed in the provisions.

The GHS further suggests that SDSs indicate when information has been withheld as confidential; that the information be disclosed to the competent authority upon request and under condition of confidentiality; that the information must be disclosed in a medical emergency, with mechanisms to protect it while ensuring timely disclosure; that the information be disclosed in non-emergency situations, also under conditions of protecting confidentiality; and that the competent authority have procedures to deal with challenges to this process. All of these principles have already been included in the trade secret provisions of the HCS, and are maintained in the final rule as previously promulgated. The proposed revisions simply conformed terminology, and added text regarding percentage composition being subject to the same provisions as specific chemical identity.

Very few comments on trade secrets or confidential business information were received in response to the ANPR. It was suggested that protection of confidential business information should be an implementation principle for the GHS modifications to HCS (Document ID #0072 and 0179), and that the current trade secret position should be retained (Document ID #0049). There was also a comment that indicated that full disclosure of all ingredients should be required on the SDS unless the employer provides a justification to the Agency showing that a particular ingredient is a trade secret, and demonstrating that the economic damage of disclosure exceeds the damage associated with the potential health effects to exposed employees (Document ID #0044). In addition, the National Paints and Coatings Association (NPCA) argued that the approaches to protection of confidential business information need to be harmonized (Document ID #0050). As NPCA stated, different approaches may lead to development of different SDSs for various authorities.

As noted above, laws regarding confidential business information are generally not specific to classification and labeling requirements, but rather reflect an overall approach of a country. It was not possible to change such laws through the harmonization of classification and labeling, and thus the limit of the agreement was to establish the principles already described. Those principles are consistent with law in the United States, and do not require any modifications to the current HCS approach to be consistent with the GHS.

There were a few comments on the trade secret provisions proposed. Some expressed their support for maintaining the current approach, with the small revisions to conform to the GHS (Document ID #0353, 0367, and 0371). Several indicated that the trade secret provisions should be extended to labels because the name of unclassified hazards was proposed to be included on labels, and when there is an ingredient of unknown toxicity, this must be indicated as well. For example, the American Petroleum Institute (Document ID #0376) indicated:

> Under certain conditions both the SDS and label can require text such as: *x percent of the mixture consists of ingredient(s) of unknown toxicity.* This statement may apply to an ingredient of a mixture whose percentage of composition is a trade secret. In such a case the trade secret provisions only apply when this statement is on the SDS. The current trade secret provisions do not apply to labels. Since the percentage composition of an ingredient can be required on labels as well as SDSs, the trade secret provisions should also apply to labels. (Footnote omitted; *See also* Document ID #0344, 0381, 0382, and 0393.)

With regard to the inclusion of the name of unclassified hazards on a label, this requirement has been deleted from the final rule. Therefore, listing unclassified hazards on the label no longer raises a trade secret concern. It should be noted that there was never a

requirement proposed for the ''specific chemical identity'' to be on the label for unclassified hazards, so even if the provision had been included in the final rule, it still would not have been analogous to the specific chemical identity required on an SDS.

With regard to the statement regarding unknown toxicity, OSHA does not find that this statement merits a change to allow the trade secret provisions to apply to labels. It is noted in paragraph A.1.3.6.2.3 that, where there is one or more ingredient of unknown toxicity in a mixture of other ingredients known to be acutely toxic, the calculation for predicting the acute toxicity cannot be completely accurate. Therefore, as suggested in the GHS, OSHA has indicated that a statement must be on the label and SDS indicating that a percentage of the mixture has unknown acute toxicity. There is no requirement to relate that general statement to specific ingredients, and specific chemical identities are not required on the label. Therefore, no trade secret information is required to be disclosed, and protection of the information under the trade secret provisions is not necessary.

There were also comments that OSHA should allow for flexibility in terms for indicating information is being withheld as a trade secret, such as ''confidential,'' ''confidential business information,'' or ''proprietary'' (Document ID #0376 and 0393). OSHA has never indicated specific terminology for claiming that information is subject to the trade secret provisions of the HCS, and would accept language such as ''confidential,'' ''confidential business information,'' or ''proprietary'' when indicating on an SDS that information is being withheld. This has never been an issue in OSHA enforcement of the HCS.

As implementation moves forward in different countries and regions, conformance to the GHS principles should lead to increased harmonization of approaches. This is an area that should be monitored to determine if further action can be defined and implemented. OSHA does not believe it would be prudent to implement changes in the approach to trade secret protection and disclosure before that time. Therefore, the final maintains the proposed language for the trade secret provisions.

(j) Effective dates. OSHA proposed to require training on the new labels and SDSs two years after publication, and all other provisions within three years. During the three-year transition period, employers would be required to be in compliance with either the existing HCS or the modified GHS, or both. OSHA recognized that hazard communication programs will go through a period of time where labels and safety data sheets under both standards will be present in the workplace. It was indicated that this would be considered acceptable, and employers would not be required to maintain two sets of labels or safety data sheets for compliance purposes. However, given the longstanding requirements for a hazard communication program, there must be no time during the transition period when hazard communication is not in effect in the workplace, and information is not available under either the existing requirements or the new final standard for exposed employees.

It should be noted that due to requirements of the **Federal Register**, a revision date of October 1, 2009, was entered into the proposed language to indicate the version to be used as the existing HCS standard. This confused some commenters (*See, e.g.,* Document ID #0376). There were no actual revisions introduced as of that date, and it is irrelevant to this final rule.

Many comments were received in response to the ANPR on the issue of phasing in the requirements of the GHS, as well as on current practices and time frames required for various activities. There was a wide variety of opinions, as well as a number of factors that commenters suggested should be considered in establishing effective dates.

OSHA specifically requested input on the possibility of phasing in requirements based on the size of the business. While a few commenters supported this approach (*See, e.g.,* Document ID #0022, 0144, 0146, and 0151), many more indicated that this would not be appropriate (*See, e.g.,* Document ID #0018, 0033, 0107, 0116, 0123, 0147, 0154, and 0171). One reason given was that the supply chain may involve large businesses purchasing from small businesses, and thus the large businesses would need information from the small businesses in order to comply themselves (Document ID #0080 and 0123).

There were also those who thought the phasing should be coordinated with other trading partners, particularly the European Union (Document ID #0024, 0072, 0080, 0081, 0163, 0171, and 0179). The European phasing is taking place over a long period of time because of the REACH requirements for chemicals that are going into effect and not necessarily because of the amount of time needed just for compliance with GHS. Another suggestion that had support from commenters was to phase in substances first, and then cover mixtures, or to have a three-step phase-in that includes intermediates before mixtures (*See, e.g.,* Document ID #0021, 0024, 0034, 0036, 0122, 0141, and 0154).

There were also suggestions for a specific number of years, or a range of years, for phase-in. Some of these suggested less than 3 years (*See, e.g.,* Document ID #0019, 0028, and 0064). A number suggested 3 to 5 years, or in some cases, 6 years (*See, e.g.,* Document ID #0015, 0032, 0038, 0111, 0125, and 0163). And there were some commenters who suggested anywhere from 7 to 13 years for full compliance (*See, e.g.,* Document ID #0018, 0050, 0077, 0078, 0116, 0129, 0141, and 0164).

OSHA decided on the three-year proposal based on a consideration of the widely diverse viewpoints expressed, as well as information provided by commenters about stockpiles and other issues. It is clear that activities have already begun by a number of vendors of software programs for hazard classification and labeling to convert to the GHS, and make programs available for companies to use to comply with requirements around the world as countries adopt the GHS.

Stakeholders provided many comments, as well as testimony, on the proposed effective dates. As with the record submitted in response to the ANPR described above, the opinions ranged over a wide variety of effective date options.

As noted, OSHA proposed that employers provide training regarding the new labels and safety data sheets two years after publication of the final rule. The intent of this training is to ensure that when employees begin to see such labels and SDSs in their workplaces, they understand how to use them and access the information effectively. Given the number of chemicals imported into American workplaces, as well as the number of employers who are already beginning to change over to the new formats, OSHA believes it is important to have this introductory training done before all of the labels and SDSs will be changed. It is not possible to pick a time frame that would ensure that such training is done before employees see any of these documents, but two years is a reasonable period of time and helps to ensure that employees will be trained before the new formats become the standard practice.

This training is not required to address the specific hazards of the chemicals, or the protective measures. Employees will have already been trained on hazards and protective

measures under the existing hazard communication requirements, but they will not have had training on the new label elements (*e.g.,* pictograms and signal words) and SDS format, nor have learned how this information is to be used in their workplaces. Completion of such training in two years will help to ensure they can use the new documents effectively when they begin to arrive in their workplaces.

Some commenters thought two years would not be enough time, or who appeared to misunderstand what training was to be done by this date (*See, e.g.,* Document ID #0330, 0344, 0351, 0361, 0390, 0397, and 0399). For example, the American Society of Safety Engineers and Industrial Health and Safety consultants indicated that the training should be completed within one year of the final rule (Document ID #0336 and 0410). But the majority of those who commented agreed that two years was an appropriate time period in which to complete the training on the new label and SDS formats (*See, e.g.,* Document ID #0324, 0329, 0335, 0338, 0346, 0370, and 0405).

The three-year time frame for compliance with all other requirements generated significant comment. Many commenters supported this time frame as being appropriate and feasible (*See, e.g.,* Document ID #0313, 0322, 0324, 0327, 0329, 0335, 0339, 0376, 0390, 0395, and 0405). Others indicated that three years would not be adequate (*See, e.g.,* Document ID #0342, 0371, 0399, and 0402). There were also comments that suggested additional time should be provided to distributors to ensure they have the information from suppliers to provide it downstream. For example, the National Association of Chemical Distributors (Document ID #0341) stated:

> OSHA should consider an additional 18-month phase in period for chemical distributors after the 3-year implementation date expires. This would allow for a more effective GHS while reducing any potential negative economic impact on small chemical distributors. NACD members have expressed concern that a three-year transition time for the entire value chain (suppliers, distributors, customers) presents the possibility of a bottleneck in the supply of chemicals * * *

Many commenters indicated that the time frame should be longer and tiered, with either substances first, and then mixtures, or a three-tiered system with substances, intermediate mixtures, and complex mixtures. The latter approach has been used by the EU. (*See, e.g.,* Document ID #0328, 0341, 0352, 0363, 0367, 0392, 0393, and 0400.) For example, comments on behalf of the Soap and Detergent Association and the Consumer Specialty Products Association indicated (Document ID #0344):

> Therefore, SDA and CPSA support either a sequenced approach of substance suppliers first and formulators last, or a longer overall timeframe in order to minimize the impact of undertaking this significant effort to reclassify substances and mixtures, develop revised labeling, while allowing time to deplete inventories of labels and products with a current label. Any consideration of business size for a phase-in approach would be unacceptable as businesses large and small use each other's products in their end-use products; each one may rely on the upstream supplier for information in hazard classification.

While the Agency wants to provide sufficient time for compliance, there is also a concern about the effect on employees of dealing with multiple systems during a transition period. While some time period when the currently required labels and SDSs, and the new GHS labels and SDSs, will co-exist in workplaces is inevitable, hazard communication during this transition period will be confusing and less effective. It is therefore important to minimize the effects of the transition on the effectiveness of hazard communication by ensuring that it is completed in a timely fashion, while allowing adequate time for an orderly changeover.

Requiring the phasing in of substances first, and then mixtures, clearly has some persuasive logic as an approach. However, the supply chain is not always orderly and logical. It cannot be assumed, for example, that no mixtures can be completed until all substances are done. Mixtures that are comprised of substances that are widely available, and their hazards are well known, do not need an extensive time period to complete. Some mixtures are comprised of other mixtures rather than substances, and producers of such mixtures will need information on the component mixtures before they can comply. If manufacturers of mixtures wait until the end of an extensive time period to complete their work, their customers might not meet the compliance dates. These types of issues are generally addressed by the market, and the needs of a manufacturer's customers, and cannot be individually addressed in a phasing-in period.

OSHA is also mindful of the fact that the initial HCS had a two-year phase-in period for completion and distribution of all labels and SDSs, and an additional six months for all other provisions of the rule to be completed. There was no tiered approach to substances and mixtures. In that situation, the requirements for labels and safety data sheets were completely new, and yet timely compliance was achieved by most employers. Where there were situations that needed special consideration (such as an employer not receiving the required information from suppliers), the Agency made adjustments through enforcement policies. It should also be noted that this took place nearly thirty years ago, and pre-dated many of the resources available today that can facilitate compliance—such as access to extensive information online.

As was the case in the comments to the ANPR, a number of NPRM participants referenced the timeline for compliance with European CLP requirements (*See, e.g.,* Document ID #0328, 0361, 0367, 0377, and 0392). When discussing this issue in the NPRM, OSHA noted that the dates selected for CLP compliance were influenced significantly by compliance dates for REACH, rather than providing an indication of how long compliance should take in the absence of such competing responsibilities (74 FR 50403, Sept. 30, 2009).

That being said, however, nearly two years have elapsed since the NPRM was published, and the EU requirements for notifications regarding classification of substances are now in effect. In January 2011, the European Chemicals Agency (ECHA) indicated that it had received over three million such classifications (*See* discussion earlier in the Summary and Explanation). These substance classifications are being made available in a public database. The availability of this information clearly facilitates compliance with this revised HCS. While chemical manufacturers and importers must review the information if they are using classifications performed by someone else, many of the classifications were being submitted by U.S. companies, and thus they are already substantially in compliance with the new U.S. requirements as well.

Taking into consideration all of the information received from the public during the comment periods and in hearing testimony, as well as the results of the economic analysis which examines the effects of different compliance dates on the overall costs of compliance, the following effective dates have been included in the final rule. Rather than specifying a time frame related to the publication date of the final rule, OSHA is establishing dates certain for these activities to be completed. The following table summarizes the requirements in the final rule:

TABLE XIII–3—EFFECTIVE DATES AND REQUIREMENTS

Effective completion date	Requirement(s)	Who
December 1, 2013	Train employees on the new label elements and SDS format.	Employers.
June 1, 2015	Compliance with all modified provisions of this final rule, except:	Chemical manufacturers, importers, distributors and employers.
December 1, 2015	The Distributor shall not ship containers labeled by the chemical manufacturer or importer unless it is a GHS label.	
June 1, 2016	Update alternative workplace labeling and hazard communication program as necessary, and provide additional employee training for newly identified physical or health hazards.	Employers.
Transition Period 5/25/12 to the effective completion dates noted above.	May comply with either 29 CFR 1910.1200 (this final standard), or the current standard, or both.	Chemical manufacturers, importers, distributors, and employers.

First, final paragraph (j)(1) requires training regarding the new label and SDS formats to be completed by all covered employers by December 1, 2013. OSHA has concluded that it is necessary and appropriate to complete this training prior to all of the new labels and SDSs being completed and received in workplaces so that employees know how to access and use the information appropriately. Most of those who commented on this issue agreed with that position, and with the timing proposed. Those who didn't may have misunderstood exactly what training is being required, but we have clarified that in this document.

Secondly, OSHA has not found the arguments regarding phasing in based on whether the product is a substance or a mixture to be convincing. There are many variations in the supply chain that impact the logic of this approach. In addition, given the current situation where substance classifications for the GHS have already had to be completed for both the EU countries, as well as other countries such as Japan, many suppliers involved in international trade have already had to complete substance evaluations. For those who have not, there is extensive information available as a result of these classifications having been done for the purpose of compliance with other authorities' requirements. Thus little time should be necessary to complete this part of the work.

Final paragraph (j)(2) requires compliance with all of the provisions for preparation of new labels and safety data sheets by June 1, 2015. This compliance date is consistent with the EU requirements for classification of mixtures. It also provides almost a year more time for compliance than was proposed. Thus it addresses a number of the suggestions received, but is still a reasonable time frame in terms of employee protections. There are two exceptions to this date. First, final paragraph (j)(2)(i) gives distributors an additional six months to distribute containers received from chemical manufacturers and importers with the new labels and SDSs in order to accommodate those they receive very close to the compliance date. Accordingly, by December 1, 2015, all their distributed containers must be appropriately labeled, and have the new SDS. Second, final paragraph (j)(2)(ii) gives employers until June 1, 2016, to make sure that their workplace labels and training programs reflect any new information received as a result of the final rule.

As was proposed, final paragraph (j)(3) states that employers will be considered to be in compliance with the HCS during the transition period as long as they are complying with either the existing HCS as of October 1, 2011, or this revised HCS.

Employers are encouraged to work with their suppliers to ensure they get the information they need by the dates they need it. While the final rule gives distributors and employers extra time to ensure they have the information before they have to be in compliance with all requirements, coordination will still be key to ensure everything is done on time. For example, mixture formulators need to make sure their suppliers are aware of their need to receive substance classifications as soon as possible. Employers would be best served to start evaluating their workplaces long before the year after suppliers must be in compliance to assess what they will need to do to bring their programs in line with the new requirements. As with the original rule, OSHA will handle individual problems through enforcement policies that recognize difficult issues or situations that impede compliance. Nevertheless, given the long time frame involved, and recognition of different players in the supply chain of the needs of others, OSHA expects that these situations will be minimal.

Summary and Explanation of Requirements in OSHA Standards Affected by the GHS Modifications to HCS

General Explanation

In this final standard, OSHA has modified its current standards in General Industry (29 CFR Part 1910), Construction (29 CFR Part 1926), and Maritime (Shipyards, Marine Terminals, and Longshoring (29 CFR Parts 1915, 1917, and 1918, respectively)) that contain hazard classification and communication provisions so that they will be internally consistent and aligned with the GHS modifications to the HCS. OSHA proposed to do so on the basis of the strong support in the record of comments on the ANPR. The majority of commenters who addressed the impact of the GHS on other OSHA standards recommended the Agency review all its standards and update them for consistency with GHS (71 FR 53617, Sept. 12, 2006) (Document ID #0031, 0038, 0046, 0050, 0054, 0072, 0077, 0107, 0116, 0145, 0147, 0154, 0155, 0163, 0165, 0171, and 0179). OSHA did so, and this rule contains the updates to the requirements in OSHA standards affected by the GHS modifications to HCS. Commenters also urged OSHA to complete these revisions in one rulemaking (Document ID #0079, 0123, 0137, 0154, and 0157). The comments on the proposed standard and testimony at the hearing also strongly supported modifying these standards for consistency with the GHS (Document ID #0313, 0327, 0328, 0329, 0336, 0338, 0352, 0359, 0365, 0370, 0372, 0405, 0408, 0410, 0412, and 494 Tr. 91, 162). Of the commenters who specifically addressed adopting GHS provisions on physical hazards, many urged the

Agency to conform the OSHA standards to the GHS in order to minimize discrepancies and ensure consistency (Document ID #0012, 0018, 0050, 0072, 0104, 0105, 0139, 0140, and 0144). One commenter, 3M, noted that adoption of the GHS physical hazard criteria (without changing OSHA standards) would ''create unacceptable inconsistencies between OSHA standards'' (Document ID #0128).

Several other commenters to the ANPR pointed out some of the difficulties with adoption of the GHS physical hazards criteria in OSHA standards (Document ID #0031, 0034, 0038, 0077, 0145, and 0166). BASF was concerned that modifying OSHA standards to conform to the GHS will cause them to deviate from the national consensus standards they were based on (Document ID #077). In addition, some ANPR commenters recommended that OSHA limit changes only to standards that directly refer to the HCS (Document ID #0047, 0064, 0077, 0104, and 0115). OSHA acknowledged these concerns when developing the NPRM.

OSHA's NPRM reflected the advantages of harmonizing OSHA's standards, but also took into account the places where harmonization might be too difficult at this time because it would substantially change the scope of coverage of a current standard or make OSHA's standards incompatible with other widely accepted standards (74 FR 50280, Sept. 30, 2009). OSHA proposed modifying requirements in primarily the substance-specific health standards and in physical hazards definitions and terminology for the purposes of internal consistency and compatibility with the GHS-modified Hazard Communication Standard (HCS).

Building and Trades Construction Department of AFL–CIO (BTCD) and Northrup Grumman Shipbuilding, in response to the NPRM, requested that OSHA again review the standards, and the Agency has done so (Document ID #0359 and 0395). OSHA reviewed all its standards, the comments, and the entire record and has decided to maintain the modifications to the substance-specific standards as proposed, except for some minor changes that are explained below.

Substance-Specific Health Standards

In the NPRM, OSHA updated the substance-specific health standards in General Industry, Construction, and Maritime, whether they specifically referenced HCS or contained their own hazard communication requirements. OSHA proposed to modify these standards as follows:

- Revise the provisions covering workplace signs to require warning statements that are consistent with the GHS modifications to HCS;
- Revise all standards to reference the modified HCS for labels, safety data sheets, and training, and identify the hazards that need to be addressed;
- Maintain the requirement to avoid creating dust currently in some substance-specific health standards for which GHS modifications contain no equivalent statements at this time;
- Maintain or specify language for contaminated clothing and debris;
- Update definitions in § 1910.1450, Occupational Exposure to Hazardous Chemicals in Laboratories, to maintain compatibility with the modified HCS; and
- Change the name Material Safety Data Sheets to Safety Data Sheets and require information on them to be compliant with GHS in content, format, and order.

Workplace Warning Language on Signs and Labels

OSHA proposed to update the language for workplace signs and labels to incorporate the GHS hazard statement and the applicable precautionary statement(s), where required. Most OSHA substance-specific heath standards require hazard warning signs, usually for regulated areas, and the language required on the signs varies greatly (*e.g.,* Asbestos, 4-Nitrobiphenyl, 13 Carcinogens, Vinyl Chloride, Inorganic Arsenic, Cadmium, Benzene, Coke Oven Emissions, Cotton Dust, DBCP, Acrylonitrile, Formaldehyde, Methylenedianiline, 1,3-Butadiene, Methylene Chloride, and Lead). With the GHS revision, these standards retain the requirements for specific warning language for specific signs; however, OSHA proposed to modify the language to be compatible with GHS and consistent throughout the OSHA standards. Labels for products, mixtures, and raw materials are included in the GHS-modified HCS and are required to be compliant with it. Labels required by the current standards for contaminated clothing, PPE, and waste and debris, which are not addressed in the GHS, are retained, but their language has been changed to be as reflective of GHS terminology as possible.

The vast majority of persons and entities who commented on the issue in response to the NPRM supported OSHA's harmonization of the signage and labeling currently required in its substance-specific standards with the modifications to HCS (Document ID #0313, 0315, 0327, 0328, 0329, 0330, 0336, 0338, 0344, 0365, 0370, 0372, 0376, 0381, 0382, 0383, 0405, 0408, and 0410). NIOSH pointed out that the consistent language on signs, labels, and SDSs would avoid confusion and allow for easy translation into other languages (Document ID #0414). AIHA, in supporting the modification of language for signs and labels, noted that the action was consistent with GHS and the goal of harmonization. They envisioned clearer warnings, improved comprehension, and better self-protection by workers (Document ID #0365). Companies such as Ecolab, Product Safety Solutions, DuPont Company, Phylmar Group, Stericycle, Procter & Gamble, Clariant Corporation, 3M, Industrial Health and Safety Consultants, and Wacker Chemical specifically addressed the issue of affected standards and stressed that aligning the standards with GHS would bring needed consistency and aid employee understanding (Document ID #0313, 0329, 0335, 0338, 0339, 0351, 0381, 0383, 0405, and 0410). Lawrence R. Klein of DuPont (Document ID #0329) commented that:

> * * * hazard communication regardless of whether * * * general chemicals or substance specific chemicals regulated under other OSHA standards, will prove to be beneficial for industry. Through adequate training * * * and consistent, easily comprehensible hazard and precautionary statements, via workplace signs or chemical labels, the safety and protection of employees will be enhanced.

Ameren added that the language proposed for the substance-specific standards accurately conveyed the hazards (Document ID #0330). Associations that addressed this issue also provided strong support. ORC, ASSE, NAHB, API, Alliance of Hazardous Materials Professionals, National Paint and Coatings Association, Soap and Detergent Association, ACC, and AISI agreed with OSHA that modifying the standards will provide consistency and aid in employee understanding (Document ID #0327, 0328, 0336, 0344, 0370, 0376, 0393, and 0408). Many commenters followed up with testimony at the informal public hearings. NIOSH testified that there would be better identification of what was a hazard and the nature of the hazard (Document ID #0494 Tr. 50). BCTD AFL–CIO testified that the specific format and vocabulary for labels would facilitate hazard communication across a range of English literacy, as one in four construction workers speaks a language other than English, and two in three entering workers speak Spanish. They said that the signs, symbols, and phrases will make it easier for employees to work safely with hazardous products

(Document ID #0497 Tr. 7, 16, 33–34, 62, 66). ORC Worldwide testified their companies have significant global operations and so support concurrent harmonization of hazardous communication components (Document ID #0497 Tr. 88, 91, 99). SIRC generally supported the principles of the GHS update (Document ID #0494 Tr. 118). ASSE agreed that it is important for consistency to have the same language on the label, SDS, and regulated area sign (Document ID #0496 Tr. p. 362). In speaking about all labeling requirements, USSW (Document ID #0499 Tr. 136–37) testified:

> It's imperative that the information on the labels is consistent from product to product. Incorporating the GHS labeling system with pictograms and single-word hazard statements will assist workers to quickly recognize hazards.

AIHA summed up the support from commenters and testifiers by declaring that the GHS modifications will improve quality and consistency of hazard communication information (Document ID #0496 Tr. 415).

Several commenters to the NPRM, while supporting the modifications, raised potential problems with warnings for substance-specific health standards' labels and regulated area signs. Northrop Grumman agreed with the wording of the regulated area signs and that it would enhance employee information, although there was concern that this was a change in OSHA's policy of allowing supplemental language on labels and signs that would enhance the information (Document ID #0395). OSHA has not changed its policy on regulated area signs with this rulemaking and will continue to allow supplemental language on labels and signs. ASSE suggested that, under the proposal, the term ''Cancer Agent'' would be retained in the thirteen identified carcinogens standard, though the ASSE did not believe the problems caused by this inconsistency would be significant (Document ID #0336). OSHA notes that all cancer warnings, including ''Cancer Agent'' and ''Cancer Suspect Agent,'' have been changed to ''May Cause Cancer,'' so there is no inconsistency. NAHB addressed the issue of the cancer warning in a comment to the ANPR, positing that the different signal words (''Danger'' versus ''Warning'') and different hazard statements (''May Cause Cancer'' versus ''Suspected of Causing Cancer'') may create confusion (Document ID #0065). Like other commenters, NIEHS supported consistency, but thought ''May Cause Cancer'' may not be strong enough, and recommended ''Causes Cancer'' be retained. The International Chemical Workers Union Council agreed that ''May Cause Cancer'' was not strong enough; they preferred ''Causes Cancer'' because it was a more definite statement about the health hazard. They were concerned that some workers might not see the warning as a clear indication of the material causing cancer and act accordingly (Document ID #0456). Dr. Michelle Sullivan also supported consistency among SDSs, labels, and in-plant warning signs, but cautioned that training would be needed especially on ''May Cause Cancer'' (Document ID #0382). OSHA agrees that training will be needed and that appropriately trained workers who see the phrase ''May Cause Cancer'' will be well warned and benefit from the use of a consistent hazard statement for all carcinogens.

The current substance-specific health standards that are regulated as carcinogens have varying hazard statements on signs and labels, as, for example, from ''Cancer Hazard'' for inorganic arsenic (29 CFR 1910.1018) to ''Cancer-Suspect Agent'' for vinyl chloride (29 CFR 1910.1017) to ''May Cause Cancer'' for methylenedianiline (MDA) (29 CFR 1910.1050). As stated in the preamble to the proposed standard, these warnings appeared to suggest gradations of cancer hazards, but they were not intended that way. The standards were promulgated over many years, and the differences in the warning language reflect the language widely used for each cancer warning at the time of promulgation, not the degree of hazard (74 FR 50405, Sept. 30, 2009). This inconsistency has long been a problem, especially in workplaces where two or more OSHA-regulated carcinogens are used. The final rule's revision to the substance-specific health standards will solve the problem of different warning statements by standardizing the carcinogen warning language to ''May Cause Cancer'' for each standard. This will lead to clearer and more timely recognition of the hazard and, with training, better understanding of the potential for developing cancer.

OSHA understands the points made by commenters who argued for another warning for cancer that might appear stronger, but any other warning would not be consistent with GHS and thus workers would not benefit from the global consistency of a single hazard statement for carcinogenicity. Moreover, OSHA believes that, with training, workers will understand the seriousness of the warning and benefit from seeing only one warning on carcinogens in the workplace. OSHA has concluded that the signal words and hazard statements, including ''May Cause Cancer,'' in its substance-specific health standards will provide better hazard information to employers, and has carried through the changes proposed in the NPRM to the final rule.

See Table XIII–4 for a comparison of the signs' final language to that currently required.

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Table XIII-4. Regulated Area Signs in Substance-Specific Health Standards

Standard	Substance	Original signs	Final Changes
1910.1001 1915.1001	Asbestos Regulated areas Where the use of respirators and protected clothing is required	DANGER ASBESTOS CANCER AND LUNG DISEASE HAZARD AUTHORIZED PERSONNEL ONLY RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA	DANGER ASBESTOS MAY CAUSE CANCER CAUSES DAMAGE TO LUNGS AUTHORIZED PERSONNEL ONLY WEAR RESPIRATORY PROTECTION AND PROTECTIVE CLOTHING IN THIS AREA
1910.1003	4-Nitrobiphenyl: Regulated areas Regulated areas covered by paragraph (C) (5)	CANCER-SUSPECT AGENT AUTHORIZED PERSONNEL ONLY CANCER-SUSPECT AGENT EXPOSED IN THIS AREA IMPERVIOUS SUIT INCLUDING GLOVES, BOOTS, AND AIR-SUPPLIED HOOD REQUIRED AT ALL TIMES AUTHORIZED PERSONNEL ONLY	DANGER (CHEMICAL IDENTIFICATION*) MAY CAUSE CANCER AUTHORIZED PERSONNEL ONLY DANGER (CHEMICAL IDENTIFICATION) MAY CAUSE CANCER WEAR AIR-SUPPLIED HOODS, IMPERVIOUS SUITS, AND PROTECTIVE EQUIPMENT IN THIS AREA AUTHORIZED PERSONNEL ONLY *(Use this template for all 13 carcinogens)
1910.1004	alpha-Naphthylamine:		See 1910.1003
1910.1005	Methyl chloromethyl ether:		See 1910.1003
1910.1006	3,3'-Dichlorobenzidine (and its salts):		See 1910.1003
1910.1007	bis-Chloromethyl ether:		See 1910.1003
1910.1008	beta-Naphthylamine,:		See 1910.1003
1910.1009	Benzidine:		See 1910.1003

Standard	Substance	Original signs	Final Changes
1910.1010	4-Aminodiphenyl:		See 1910.1003
1910.1011	Ethyleneimine:		See 1910.1003
1910.1012	beta-Propiolactone:		See 1910.1003
1910.1013	2-Acetylaminofluorene:		See 1910.1003
1910.1014	4-Dimethylaminoazo-benzene:		See 1910.1003
1910.1015	N-Nitrosodimethylamine:		See 1910.1003
1910.1017	Vinyl chloride: Regulated Areas	CANCER-SUSPECT AGENT AREA AUTHORIZED PERSONNEL ONLY	DANGER VINYL CHLORIDE MAY CAUSE CANCER AUTHORIZED PERSONNEL ONLY
	Hazardous operations	CANCER-SUSPECT AGENT IN THIS AREA PROTECTIVE EQUIPMENT REQUIRED AUTHORIZED PERSONNEL ONLY	DANGER VINYL CHLORIDE MAY CAUSE CANCER WEAR RESPIRATORY PROTECTION AND PROTECTIVE CLOTHING IN THIS AREA AUTHORIZED PERSONNEL ONLY
1910.1018	Inorganic arsenic	DANGER INORGANIC ARSENIC CANCER HAZARD AUTHORIZED PERSONNEL ONLY NO SMOKING OR EATING RESPIRATOR REQUIRED	DANGER INORGANIC ARSENIC MAY CAUSE CANCER DO NOT EAT, DRINK OR SMOKE WEAR RESPIRATORY PROTECTION IN THIS AREA AUTHORIZED PERSONNEL ONLY
1910.1025	Lead	WARNING LEAD WORK AREA POISON NO SMOKING OR EATING	DANGER LEAD MAY DAMAGE FERTILITY OR THE UNBORN CHILD CAUSES DAMAGE TO THE CENTRAL NERVOUS SYSTEM DO NOT EAT, DRINK OR SMOKE IN THIS AREA

Standard	Substance	Original signs	Final Changes
1910.1027	Cadmium	DANGER CADMIUM CANCER HAZARD CAN CAUSE LUNG AND KIDNEY DISEASE AUTHORIZED PERSONNEL ONLY RESPIRATORS REQUIRED IN THIS AREA	DANGER CADMIUM MAY CAUSE CANCER CAUSES DAMAGE TO LUNGS AND KIDNEYS WEAR RESPIRATORY PROTECTION IN THIS AREA AUTHORIZED PERSONNEL ONLY
1910.1028	Benzene	DANGER BENZENE CANCER HAZARD FLAMMABLE - NO SMOKING AUTHORIZED PERSONNEL ONLY RESPIRATOR REQUIRED	DANGER BENZENE MAY CAUSE CANCER HIGHLY FLAMMABLE LIQUID AND VAPOR DO NOT SMOKE WEAR RESPIRATORY PROTECTION IN THIS AREA AUTHORIZED PERSONNEL ONLY
1910.1029	Coke oven emissions	DANGER CANCER HAZARD AUTHORIZED PERSONNEL ONLY NO SMOKING OR EATING RESPIRATOR REQUIRED	DANGER COKE OVEN EMISSIONS MAY CAUSE CANCER DO NOT EAT, DRINK OR SMOKE WEAR RESPIRATORY PROTECTION IN THIS AREA AUTHORIZED PERSONNEL ONLY
1910.1043	Cotton Dust	WARNING COTTON DUST WORK AREA MAY CAUSE ACUTE OR DELAYED LUNG INJURY (BYSSINOSIS) RESPIRATORS REQUIRED IN THIS AREA	DANGER COTTON DUST CAUSES DAMAGE TO LUNGS (BYSSINOSIS) WEAR RESPIRATORY PROTECTION IN THIS AREA
1910.1044	1,2-Dibromo-3-chloropropane (DBCP)	DANGER 1,2-Dibromo-3-chloropropane (Insert appropriate trade or common names) CANCER HAZARD AUTHORIZED PERSONNEL ONLY RESPIRATOR REQUIRED	DANGER 1,2-DIBROMO-3-CHLOROPROPANE MAY CAUSE CANCER WEAR RESPIRATORY PROTECTION IN THIS AREA AUTHORIZED PERSONNEL ONLY

Standard	Substance	Original signs	Final Changes
1910.1045	Acrylonitrile (AN)	DANGER ACRYLONITRILE (AN) CANCER HAZARD AUTHORIZED PERSONNEL ONLY RESPIRATORS MAY BE REQUIRED	DANGER ACRYLONITRILE (AN) MAY CAUSE CANCER RESPIRATORY PROTECTION MAY BE REQUIRED IN THIS AREA AUTHORIZED PERSONNEL ONLY
1910.1047	Ethylene oxide (EtO)	DANGER ETHYLENE OXIDE CANCER HAZARD AND REPRODUCTIVE HAZARD AUTHORIZED PERSONNEL ONLY RESPIRATORS AND PROTECTIVE CLOTHING MAY BE REQUIRED TO BE WORN IN THIS AREA	DANGER ETHYLENE OXIDE MAY CAUSE CANCER MAY DAMAGE FERTILITY OR THE UNBORN CHILD RESPIRATORY PROTECTION AND PROTECTIVE CLOTHING MAY BE REQUIRED IN THIS AREA AUTHORIZED PERSONNEL ONLY
1910.1048	Formaldehyde Regulated Areas Storage Areas for Contaminated Clothing and Equipment	DANGER FORMALDEHYDE IRRITANT AND POTENTIAL CANCER HAZARD AUTHORIZED PERSONNEL ONLY DANGER FORMALDEHYDE-CONTAMINATED [CLOTHING] EQUIPMENT AVOID INHALATION AND SKIN CONTACT	DANGER FORMALDEHYDE MAY CAUSE CANCER CAUSES SKIN, EYE, AND RESPIRATORY IRRITATION AUTHORIZED PERSONNEL ONLY DANGER FORMALDEHYDE-CONTAMINATED [CLOTHING] EQUIPMENT DO NOT BREATHE VAPOR DO NOT GET ON SKIN
1910.1050	Methylenedianiline (MDA)	DANGER MDA MAY CAUSE CANCER LIVER TOXIN AUTHORIZED PERSONNEL ONLY RESPIRATORS AND PROTECTIVE CLOTHING MAY BE REQUIRED TO BE WORN IN THIS AREA	DANGER MDA MAY CAUSE CANCER CAUSES DAMAGE TO THE LIVER RESPIRATORY PROTECTION AND PROTECTIVE CLOTHING MAY BE REQUIRED IN THIS AREA

Standard	Substance	Original signs	Final Changes
			AUTHORIZED PERSONNEL ONLY
1926.60	MDA	DANGER MDA MAY CAUSE CANCER LIVER TOXIN AUTHORIZED PERSONNEL ONLY RESPIRATORS AND PROTECTIVE CLOTHING MAY BE REQUIRED TO BE WORN IN THIS AREA	DANGER MDA MAY CAUSE CANCER CAUSES DAMAGE TO THE LIVER RESPIRATORY PROTECTION AND PROTECTIVE CLOTHING MAY BE REQUIRED IN THIS AREA AUTHORIZED PERSONNEL ONLY
1926.62	Lead	WARNING LEAD WORK AREA POISON NO SMOKING OR EATING	DANGER LEAD WORK AREA MAY DAMAGE FERTILITY OR THE UNBORN CHILD CAUSES DAMAGE TO THE CENTRAL NERVOUS SYSTEM DO NOT EAT, DRINK OR SMOKE IN THIS AREA
1926.1101	Asbestos Regulated areas Where the use of respirators and protected clothing is required	DANGER ASBESTOS CANCER AND LUNG DISEASE HAZARD AUTHORIZED PERSONNEL ONLY RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA	DANGER ASBESTOS MAY CAUSE CANCER CAUSES DAMAGE TO LUNGS AUTHORIZED PERSONNEL ONLY WEAR RESPIRATORY PROTECTION AND PROTECTIVE CLOTHING IN THIS AREA
1926.1127	Cadmium	DANGER CADMIUM CANCER HAZARD CAN CAUSE LUNG AND KIDNEY DISEASE AUTHORIZED PERSONNEL ONLY RESPIRATORS REQUIRED IN THIS AREA	DANGER CADMIUM MAY CAUSE CANCER CAUSES DAMAGE TO LUNGS AND KIDNEYS WEAR RESPIRATORY PROTECTION IN THIS AREA AUTHORIZED PERSONNEL ONLY

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OSHA's proposal to change the signage requirements in the substance-specific standards was nearly universally supported by commenters. Product Safety Solutions, AHMP, National Paint and Coatings Association, Ameren, Wacker Chemical Corp, ASSE, Stericycle, Phylmar Regulatory Roundtable, Soap and Detergent Association/Consumer Specialty Products Association, Ecolab, Inc., AIHA, ORC Worldwide, National Association of Homebuilders, API, Procter & Gamble Company, Dr. Michelle Sullivan, Clariant Corporation, American Chemical Council, 3M, AISI (American Coke and Coal Chemicals Institute), Industrial Health and Safety Consultants, and NIOSH, in their comments to the NPRM, specifically supported the harmonization of signage required in the substance-specific standards (Document ID #0313, 0327, 0328, 0330, 0335, 0336, 0338, 0339, 0344, 0351, 0365, 0370, 0372, 0376, 0381, 0382, 0383, 0393, 0405, 0408, 0410, and 0412). USSE, agreeing with the commenters above, testified that having the same wording on regulated-areas signs would be helpful to workers as they move around and it is better for them to see the same information they have been trained on (Document ID #0499 Tr. 165).

Commenters raised several signage issues. Dow Chemical advocated the elimination of signs in substance-specific health standards, arguing that there was no need for signs since the chemical will be labeled and workers can also refer to an SDS (Document ID #0353). OSHA disagrees. The substance-specific standards' sign requirements cover regulated areas of facilities that are by definition high-exposure or potentially high-exposure areas. They are among the most dangerous areas in a facility, which is why OSHA requires signs. Moreover, contrary to what Dow assumes, product labels may not always be available in these circumstances. Thus, OSHA disagrees with Dow Chemical and believes the signs convey crucial information about the chemical hazard in a regulated area and that the signs benefit not only the well-trained worker but also other workers who might be near, or inadvertently enter, the regulated area.

The Battery Council International (Document ID #0390) had suggestions for language on regulated area signs for the lead standard, 29 CFR 1910.1025. First, they requested that OSHA change the language from ''Causes Damage to the Central Nervous System'' to ''May Cause Damage to the Central Nervous System,'' since nerve damage may or may not occur depending on whether or not the facility has taken proper precautions. However, as discussed above, OSHA has updated the signs to be consistent with GHS labeling to ensure that the worker is receiving the same message and this would provide better identification of the hazard. Therefore, OSHA has retained the proposed language for lead regulated area signs in the final.

The Battery Council International also requested that OSHA retain the original language § 1910.1025(m)(2) so that it would be clear that other signage may also be used in places where required (Document ID #0390). For example, it reported that California has such a signage requirement under Proposition 65. OSHA agrees that, in some very specific cases, other warnings may be necessary for lead. Thus, the current requirement that, ''The employer may use signs required by other statutes, regulations or ordinances in addition to, or in combination with, signs required by this paragraph,'' has been retained in the final rule for the lead standard at § 1910.1025(m)(2)(iv).

OSHA concludes that the proposed changes, which are as close as possible to the GHS terminology, are essential in order to make the warnings on signs consistent with each other, as well as labels, to the extent possible. These consistent warning signs will provide the best hazard communication in the relevant workplace regulated areas. The proposed changes to the signage requirements of the substance-specific standards have been carried through to the final rule.

Hazard Communication, Classification and Labels

OSHA's current substance-specific standards are inconsistent in that some have their own communication of hazards requirements, while other standards reference the HCS, and still other standards have no requirements for labels and safety data sheets in their sections. Although these latter standards are missing requirements, they still are covered by HCS. Similarly for labels, while most substance-specific standards require labels on containers of raw materials, mixtures, and products, some specify specific language while others reference the HCS. As proposed, and as carried forward in this final rule, OSHA has standardized the language for hazard communication and has removed the requirements for specific language labels from the ''Communications of hazards'' paragraphs of the substance-specific standards. The new paragraph in each substance-specific standard uses the following model format:

Hazard Communication—General.

(i) Chemical manufacturers, importers, distributors and employers shall comply with all requirements of the Hazard Communication Standard (HCS) (29 CFR 1910.1200) for [chemical name].

(ii) In classifying the hazards of [chemical name] at least the following hazards are to be addressed: [hazard information].

(iii) Employers shall include [chemical name] in the hazard communication program established to comply with the HCS. Employers shall ensure that each employee has access to labels on containers of [chemical name] and to safety data sheets, and is trained in accordance with the requirements of HCS and paragraph [Training paragraph] of this section.

By adding this paragraph in each substance-specific health standard, OSHA achieves consistency across standards and with GHS principles. Some commenters indicated that the chemicals covered by the substance-specific standards should not be classified any differently than any other chemical in regard to the health hazards included on a label or SDS (*See, e.g.,* Document ID #0365). That was OSHA's intent. OSHA has clarified the regulatory language to minimize confusion. The final rule, like the proposal, requires compliance with the HCS in each substance-specific standard.

OSHA believes that requiring standards to reference HCS will ensure consistency with the GHS revisions and across the standards and consistency when the specific chemical is part of a mixture. Removal of the current specific warning language was essential for adoption of the GHS language. Retention of these provisions in the standards would result in the untenable situation of two potentially conflicting requirements, only one of which (the reference to HCS) would be in accord with the GHS-modified HCS. Moreover, as OSHA noted in the preamble to the proposed standard, the hazard statements specified for the chemical in the standard might not be correct when the chemical is part of a mixture. As for the current standards that simply referenced HCS, employers could choose any language and format that conveyed the necessary information. This approach is no longer allowed because, as OSHA has found in adopting the GHS approach, consistency in labeling is key to effective communication of hazards. The vast majority of commenters agreed. For example, AHMP noted that eliminating language inconsistent with established hazard statements will facilitate hazard communication and should not result in lower protection (Document ID #0327). Others, including NIOSH, DuPont,

Ameren, ASSE, Ecolab, Inc., AIHA, ORC Worldwide, NAHB, API, Procter & Gamble, Dr. Michelle Sullivan, ACC, 3M, AISI, Industrial Health and Safety Consultants, and American Coke and Coal Chemicals Institute, agreed (Document ID #0329, 0330, 0336, 0351, 0365, 0370, 0372, 0376, 0381, 0382, 0393, 0405, 0408, 0410, and 0412). Commenters noted that for the benefits of consistency to accrue, harmonization is essential (Document ID #0313, 0315, 0327, 0328, 0329, 0330, 0335, 0336, 0338, 0344, 0365, 0370, 0372, 0376, 0381, 0382, 0383, 0393, 0405, 0408, and 0410). NIEHS Worker Education and Training Program agreed, testifying that consistency of labels and safety data sheets is important to help employees recognize hazards and be able to deal with them effectively (Document ID #0497 Tr. 104). Phylmar Regulatory said that standardized label elements will be more effective in communicating hazard information (Document ID #0497 Tr. 108–109). AIHA testified that standardized labels will make hazard identification easier and the pictograms will be useful in workplaces where English language reading is limited (Document ID #0496 Tr. 415). USSW affirmed that one hazard communication system would be best (Document ID #0499 Tr. 178). OSHA believes all these commenters provide important and compelling reasons for the labels required by the substance-specific standards to be consistent with the GHS modifications to HCS.

For classification purposes, OSHA proposed to provide guidance on the potential health outcomes that must be addressed when classifying a substance by setting forth the health end-points (outcomes) for each substance-specific health standard. The Agency did not attempt to formally classify each substance; rather, OSHA provided a proposed list of health effects to assist the classifier in determining what must be considered for inclusion on the new labels. The GHS classification process for a specific substance dictates the actual hazard warnings and precautionary statements that are required on the new GHS-compliant labels and SDSs. In determining the hazards to include for each substance-specific health standard, the Agency's primary sources on health effects were the information gained in its own rulemakings and subsequent experience, the NIOSH Pocket Guide to Chemical Hazards (2005), and the International Chemical Safety Cards (ICSCs). The ICSCs are an undertaking of the International Programme on Chemical Safety (IPCS) (a joint activity of three cooperating International Organizations, namely, the United Nations Environment Programme (UNEP), the International Labour Office (ILO), and the World Health Organization (WHO)) and are peer reviewed by a group of internationally recognized experts (Document ID #0412.2). As a secondary source, OSHA also considered the European Union's (EU) ''Proposal for a Regulation of the European Parliament and of the Council on Classification, Labeling and Packaging of Substances and Mixtures, and amending Directive 67/548/EEC and Regulation (EC) No 1907/2006.'' From these sources, OSHA developed hazard endpoints to be considered for hazard classification in the substance-specific health standards based on either of two criteria: (1) The health hazard was the basis for the original rulemaking; or (2) the health hazard was asserted by OSHA, NIOSH, or IPCS, and confirmed by a second source. For example, acrylonitrile (AN) (§ 1910.1045) was regulated by OSHA based on its carcinogenicity. Skin sensitization was acknowledged by OSHA, IPCS, and EU; skin irritation by OSHA, NIOSH, and EU; respiratory tract irritation by IPCS and EU; eye irritation by OSHA, NIOSH, and IPCS; liver effects and central nervous system effects by IPCS and NIOSH; acute toxicity by OSHA, IPCS, and EU; and flammability by IPCS, NIOSH, and EU. Because all these effects met the criteria for inclusion, skin sensitization, skin irritation, respiratory irritation, eye irritation, liver effects, central nervous system effects, acute toxicity, and flammability were listed as potential hazards in the acrylonitrile standard.

OSHA's approach, including its choice of sources for health effects, was generally supported by many commenters to the proposal (Document ID #0329, 0339, 0351, 0370, and 0376). However, some, including NIOSH, AIHA, ASSE, Ameren, Stericycle, Wacker Chemical Corporation, and 3M Corporation, wanted OSHA to add other sources (Document ID #0233, 0330, 0338, 0365, 0405, and 0412). NIOSH suggested OSHA look at OECD SIDS, ESIS, NOAA, NLM, NLM–TOXSEEK, NLM–TOXNET, IPCS, CCOHS, and GESTIS (Document ID #0412). AIHA commented that substance-specific health standards should be classified the same as other chemicals and that other references such as ATSDR Toxicological Profiles, IRIS Toxicological Reviews, WHC Monographs, CICADS, OECD SIDS, and Patty's Toxicology should be used (Document ID #0365). Wacker Chemical Corporation recommended IARC be included and that one recognized body's determination of a hazard should be sufficient (Document ID #0335). ASSE urged inclusion of ACGIH documentation of TLVs and RELs and precautions developed by manufacturers from testing and epidemiological studies. ASSE submitted a long list of sources including NSC's Fundamentals of Industrial Hygiene, The Industrial Environment—Its Evaluation and Control, Patty's Industrial Hygiene and Toxicology, Casarett & Doull's Toxicology, The Dose Makes the Poison, Quick Selection Guide to Chemical Protective Clothing, U.S. DHHS Seventh Annual Report on Carcinogens, AIHA Engineering Field Reference Manual, and 17 others (Document ID #0336). AIHA urged OSHA to have the hazards for the substance-specific standards considered, but not be mandatory. It recommended additional references such as ATSDR Toxicological Profiles, IRIS Toxicological Reviews, EHC Monographs, CICADS, OECD SIDS, and Patty's Toxicology (Document ID #0365). Ameren would have OSHA add ACHIS and AIHA sources (Document ID #0330). Stericycle advocated adding Industrial Chemical Safety Cards, European Commission, and ACGIH as secondary sources (Document ID #0338). Still others, such as ASSE, API, AHMP, Product Safety Solutions, National Paint and Coatings Association, and Industrial Minerals Association—North America, deemed OSHA's choice of sources inadequate (Document ID #0313, 0327, 0328, 0338, 0376, and 0379). USSW (Document ID #0403) found lists such as IARC's and NTP's useful, but wanted OSHA to state in the regulatory text that a chemical on one or more of these lists was sufficient to classify it as hazardous (although the absence of a chemical on a list does not mean it is not hazardous). It also wanted OSHA to use lists in enforcement.

Commenters also raised other issues in this regard. API believed OSHA should just reference the GHS criteria, while ASSE wanted OSHA to use other authoritative references (Document ID #0336 and 0376). Both AHMP and Product Safety Solutions were concerned the NIOSH Pocket Guide and International Chemical Safety Cards had not been subject to rulemaking and could be overly conservative, even though they felt these sources could be used as information, but not as precedent if significant contradictory information is presented (Document ID #0313 and 0327). National Paint and Coatings Association commented that the substance-specific standards' health

hazards should remain as published and only new information should be subject to the two-reference rule (Document ID #0328). Still other commenters, including DuPont Company, Soap and Detergent Association and Consumer Specialty Products Association, Procter & Gamble, and Dr. Michelle Sullivan, expressed concern about whether the sources OSHA was using were to be current or updated, as newer editions become available (Document ID #0329, 0344, 0381, and 0382).

OSHA believes these comments reflect a misunderstanding of what OSHA proposed for its substance-specific health standards and how the sources were used to yield health effects to be considered in classifying all health hazards but not to perform a formal classification. (*See* 74 FR at 50411, Sept. 30, 2009, for the preamble explanation). The substance-specific health standards are unique in that they were all the subject of rulemaking, enabling the Agency to collect extensive information on sources and on health effects. That collection of information, coupled with the Agency's own expertise, enabled the Agency to confidently select sources for these regulated chemicals that would provide adequate information to classifiers. OSHA disagrees with commenters who suggested its chosen sources were inadequate. Some commenters recommended other sources. OSHA believes that these other sources can be useful in classifying hazards, and can certainly be used by classifiers in evaluating the hazards related to chemicals regulated by the substance-specific standards. At issue here, though, is the method OSHA has determined to use for selecting a list of hazard endpoints that, at a minimum, must be considered to provide accurate warnings on labels for its substance-specific standards. OSHA has concluded that the method it used in the proposal is scientifically sound and appropriate.

In complying with the HCS, as discussed above, classifiers must take into account available scientific information about the hazards of the chemical being classified, which could include information found in the other sources noted by the commenters. The manufacturer, distributor, or importer must still classify and categorize each regulated chemical (in the substance-specific health standards) in compliance with the GHS-modified HCS and its appendices. The lists of endpoints for each substance-specific standard are the minimum that must be considered. The manufacturer or importer has leeway to use additional primary studies and sources to evaluate the substance-specific chemical and is free to add health effects' endpoints as appropriate according to the studies or sources. As discussed previously in this section, the HCS generally uses a weight-of-evidence approach in classifying health hazards. Therefore, a superior source or significant and compelling contradictory information to a particular source usually must be weighed with the total body of evidence.

IMA–NA suggested that OSHA's methodology for determining the list of health effects to be considered by classifiers does not meet the requirements of the Information Quality Act (Document ID #0233). OSHA disagrees. That statute, and the guidelines published under it (discussed in more detail above), require that agencies take steps to ensure the ''quality, objectivity, utility, and integrity'' of information they disseminate. Similar to its response to the concern regarding TLVs, discussed above, OSHA does not believe that it is disseminating information for purposes of the IQA when it merely requires that manufacturers and importers consider specific health effects listed for each substance-specific standard in classifying the chemical under the HCS. However, even if it were disseminating information in the final rule, OSHA believes that it has complied with the applicable requirements of the IQA. OSHA has fully described the methods by which it determined the listed health effects for each substance, relied only on respected health compilations prepared by governmental agencies or subject to peer review, and subjected its analysis to notice and comment in this rulemaking. This adequately assures the quality, objectivity, utility, and integrity of any dissemination of information involved in these provisions of the final rule.

OSHA received no comments on the particular hazards proposed for each substance-specific health standard, and retained them in the final rule. The endpoints for each substance-specific standard are listed in Table XIII–5, ''Health Effects Determined for the Substance-Specific Standards.''

TABLE XIII–5—HEALTH EFFECTS DETERMINED FOR THE SUBSTANCE-SPECIFIC STANDARDS

Standard No.	Substance	Health effects
1910.1001, 1915.1001, 1926.1101.	Asbestos	Cancer and lung effects.
1910.1003	4-Nitrobiphenyl	Cancer.
1910.1003	Alpha-Naphthylamine	Cancer; skin irritation; and acute toxicity effects.
1910.1003	Methyl chloromethyl ether	Cancer; skin, eye, and respiratory effects; acute toxicity effects; and flammability.
1910.1003	3,3′-Dichlorobenzidine (and its salts)	Cancer and skin sensitization.
1910.1003	Bis-Chloromethyl ether	Cancer; skin, eye, and respiratory tract effects; acute toxicity effects; and flammability.
1910.1003	Beta-Naphthylamine	Cancer and acute toxicity effects.
1910.1003	Benzidine	Cancer and acute toxicity effects.
1910.1003	4-Aminodiphenyl	Cancer.
1910.1003	Ethyleneimine	Cancer; mutagenicity; skin and eye effects; liver effects; kidney effects; acute toxicity effects; and flammability.
1910.1003	Beta-Propiolactone	Cancer; skin irritation; eye effects; and acute toxicity effects.
1910.1003	2-Acetylaminofluorene	Cancer.
1910.1003	4-Dimethylaminoazo-benzene	Cancer; skin effects; and respiratory tract irritation.
1910.1003	N-Nitrosodimethylamine	Cancer; liver effects; and acute toxicity effects.
1910.1017	Vinyl chloride	Cancer; central nervous system effects; liver effects; blood effects; and flammability.
1910.1018	Inorganic arsenic	Cancer; liver effects; skin effects; respiratory irritation; nervous system effects; and acute toxicity effects.

TABLE XIII–5—HEALTH EFFECTS DETERMINED FOR THE SUBSTANCE-SPECIFIC STANDARDS—Continued

Standard No.	Substance	Health effects
1910.1025, 1926.62	Lead	Reproductive/developmental toxicity; central nervous system effects; kidney effects; blood effects; and acute toxicity effects.
1910.1026, 1915.1026, 1926.1126.	Chromium VI	Cancer; skin sensitization; and eye irritation.
1910.1027, 1926.1127	Cadmium	Cancer; lung effects; kidney effects; and acute toxicity effects.
1910.1028	Benzene	Cancer; central nervous system effects; blood effects; aspiration; skin, eye, and respiratory tract irritation; and flammability.
1910.1029	Coke oven emissions	Cancer.
1910.1043	Cotton Dust	Lung effects.
1910.1044	1,2-dibromo-3-chloropropane (DBCP)	Cancer; reproductive effects; liver effects; kidney effects; central nervous system effects; skin, eye, and respiratory tract irritation; and acute toxicity effects.
1910.1045	Acrylonitrile (AN)	Cancer; central nervous system effects; liver effects; skin sensitization; skin, respiratory, and eye irritation; acute toxicity effects; and flammability.
1910.1047	Ethylene oxide (EtO)	Cancer; reproductive effects; mutagenicity; central nervous system; skin sensitization; skin, eye, and respiratory tract irritation; acute toxicity effects; and flammability.
1910.1048	Formaldehyde	Cancer; skin and respiratory sensitization; eye, skin, and respiratory track irritation; acute toxicity effects; and flammability.
1910.1050, 1926.62	Methylenedianiline (MDA)	Cancer; liver effects; and skin sensitization.
1910.1051	1,3 Butadiene (BD)	Cancer; eye and respiratory tract irritation; center nervous system effects; and flammability.
1910.1052	Methylene chloride	Cancer; cardiac effects; central nervous system effects; liver effects; and skin and eye irritation.

The NPRM retained specific language for labels in the substance-specific health standards for containers of contaminated clothing or waste and debris to ensure that protection gained from communicating these hazards to the downstream recipients of the materials would not be lessened. The proposal, however, updated the language to be consistent with the GHS. The labeling requirements in these standards are part of broad protections, resulting from PELs and ancillary provisions such as exposure monitoring, personal protective equipment, and medical surveillance. These requirements for labeling containers of contaminated clothing, PPE, and waste and debris have been an integral part of the standards since their promulgation. To simply conform the labeling requirements for these kinds of containers to the GHS-modified HCS rule would not offer the extra protection currently provided in these standards; because of the variation in the quantity of chemicals in the containers of contaminated clothing, PPE, and waste and debris, the chemical concentration may be lower than the specified cut-off values/concentration limits. In such a case, if OSHA only relied on the GHS-modified HCS labeling requirement, labeling for these containers may not be triggered and protections would be lessened.

Commenters agreed that specific language for labels on containers of contaminated clothing and waste and debris should be maintained. For example, Ameren and 3M Corporation commented that maintaining specific language for labels on contaminated clothing and waste/debris containers for the substance-specific health standards will provide adequate warnings to all (Document ID #0330 and 0405). AIHA, in supporting the specific labels, noted that the workplace-contaminated materials are not hazardous chemicals in commerce; thus, these special labels are not inconsistent with GHS. Further, AIHA said that because recipients of these containers are accustomed to specific warnings, a change, such as elimination of the specific warning language because it might not be required by GHS, might be perceived as a change in hazard (Document ID #0365). The Battery Council International urged OSHA not to eliminate the label language requiring the disposal of lead-contaminated waste water in accordance with applicable local, state, or federal regulations in § 1910.1025(m)(2) for contaminated clothing. OSHA agrees that this information is important and is not inconsistent with GHS labeling. Therefore, OSHA has retained this language for the labels for contaminated clothing and equipment in the final rule. AISI and Industrial Health and Safety Consultants urged OSHA to require that the language on containers of contaminated clothing and waste/debris be in accord with the GHS guidelines. Such harmonization would maintain consistency with other labeling and minimize confusion of downstream handlers (Document ID #0408). In addition, Industrial Health and Safety Consultants felt that containers of contaminated clothing and waste/debris should be classified according to the HCS and the specific language on the label should be eliminated (Document ID #0410). As discussed below, OSHA does not agree. Industrial Health and Safety Consultants also suggested that OSHA require HCS classification and labeling of contaminated waste clothing and waste for all chemicals (Document ID #0410). OSHA did not propose such extensive new requirements for containers of chemically contaminated clothing and waste and debris. These requirements were not part of HCS and would be a significant addition to the final rule.

OSHA agrees with the commenters who advocate retaining the warnings and harmonizing these labels for contaminated clothing and waste and

debris containers, and did so to the extent possible. (*See* 74 FR 50434–50439, Sept. 30, 2009). However, classifying containers of chemically contaminated clothing and waste and debris consistent with GHS would be an impossible task, as substances found on contaminated clothing and waste and debris often occur in unknown, varying, and frequently small quantities. In order to ensure and maintain protection for employees in workplaces that receive these containers, labeling of the hazards with specific language is essential. The warnings, like all other warnings, are most effective when they are consistent with each other and, to the extent possible, with the GHS language. This consistency was achieved with the proposed language. Therefore, the proposed language for the substance-specific standards remains unchanged and is finalized in this rulemaking.

OSHA is adding two warnings to the Cadmium standard, which were left out of one paragraph of the proposal, through an error. In the NPRM, OSHA proposed that the warning labels for waste, scrap, or debris be required to include ''Danger''; ''Contains Cadmium''; and ''May Cause Cancer'' in paragraph 1910.1027(m)(3)(ii). The warnings ''Causes Damage to Lungs and Kidneys'' and ''Avoid Creating Dust'' were inadvertently left out of this paragraph. (The NPRM properly included these two warnings in paragraph 1910.1027(i)(2)(iv) for bags and containers of contaminated protective clothing and equipment.) OSHA is correcting this error by adding these warnings in this final standard, making the Cadmium standard consistent with the other substance-specific standards and, to the extent possible, with GHS.

In addition, for labels of bags or containers of contaminated clothing and equipment, OSHA has determined precautionary statements that address creating dust in the current substance-specific health standards must be retained even though there is no GHS equivalent. At this time, a work group formed under the UN Sub-Committee of Experts for the GHS (UN Sub-committee) is working to finalize issues related to hazard and precautionary statements. OSHA has recommended to the UN Sub-committee to adopt the phrase ''avoid creating dust'' as a precautionary statement, if this statement is adopted as a precautionary statement, then this statement will be consistent with the GHS. However, if the UN Sub-committee does not adopt such a statement, OSHA intends to continue to require the dust statements in those paragraphs for labels of bags and containers of contaminated clothing and equipment since OSHA has concluded that removing these statements would be a lessening of protection. An example of requirements for those statements can be found in OSHA's Cadmium standard, § 1910.1027(i), (k), and (m). OSHA also inadvertently removed the term ''Avoid Creating Dust'' from the Asbestos labeling requirements in § 1910.1001(j) and § 1926.1101(l) of the proposal. As discussed above, OSHA believes that this is a unique statement and should be retained. OSHA is correcting this error by reinstating this phrase in the asbestos labeling requirements in § 1910.1001(j) and § 1926.1101(l).

Occupational Exposure To Hazardous Chemicals in Laboratories: Definitions

OSHA proposed to modify most of paragraph (b), Definitions, in § 1910.1450, Occupational Exposure to Hazardous Chemicals in Laboratories (the laboratory standard), in order to maintain compatibility with HCS. In particular, OSHA removed the definitions of Combustible liquid, Compressed gas, Explosive, Flammable, Flashpoint, Organic peroxide, Oxidizer, Unstable (reactive), and Water-reactive from paragraph (b). In addition, in the NPRM, OSHA revised the definitions of Hazardous chemical, Physical hazard, and Reproductive toxins in paragraph (b) and added definitions for Health hazard and Mutagen in paragraph (b). By these modifications to § 1910.1450, the proposal sought to ensure that the definitions to the GHS-modified HCS also apply to the laboratory standard (§ 1910.1450). The modification is consistent with the goal of this rulemaking and the original intent of the laboratory standard. OSHA explained in the preamble to the laboratory standard the importance of having the HCS and the laboratory standard both use the same definitions for hazardous chemicals:

> The term ''hazardous chemical'' used in this final rule relies on the definition of ''health hazard'' found in the OSHA Hazard Communication Standard. As discussed in the scope and application section above, commenters urged OSHA to maintain consistency in terms between the Hazard Communication Standard and this final standard since laboratories are subject to both regulations.
>
> (55 FR 3315, Jan. 31, 1990).

Ameren agreed with OSHA that ''combustible liquid'' should be removed from paragraph (b) (Document ID #0330). However, the company recommended that OSHA replace the term with specific flashpoint criteria. OSHA disagrees that a definition for combustible liquid with specific flashpoint criteria differing from GHS-modified HCS should be contained in the laboratory standard. OSHA's intention is to harmonize the laboratory standard with the GHS-modified HCS. The final HCS rule contains definitions of flammable liquids with flashpoint criteria in Appendix B, and these flashpoint criteria include what are currently the combustible liquid classes. The laboratory standard does not contain specific requirements for physical hazards, including flammable or combustible liquids. Rather, this program standard contains requirements for such things as a chemical hygiene plan, employee exposure determination, training, medical consultation and examinations, and recordkeeping. Thus, OSHA does not see a need for including separate flashpoint criteria for flammable or combustible liquids and believes that reference to the flammable liquid categories in HCS is appropriate for § 1910.1450.

OSHA proposed to maintain the current definition of ''select carcinogens'' in the laboratory standard since the original purpose of the standard was to deviate from the HCS definition and narrow the scope of the standard. As noted in the preamble to the final rule for the laboratory standard, the scope was set for ''select carcinogens'' based on the small, often minute, quantities of substances handled. OSHA stated its reasons for this deviation in that preamble, and those reasons remain persuasive:

> This final rule, however, modifies the carcinogen definition and the obligatory action so that special provisions must be explicitly considered by the employer, but need only be implemented when the employer deems them appropriate on the basis of the specific conditions existing in his/her laboratory. Moreover, the term, ''carcinogen'' has been replaced by ''select carcinogen'' which covers a narrower range of substances * * *
>
> (55 FR 3315, Jan. 31, 1990).

OSHA has thus incorporated in the final rule its proposed changes to the definitions in the laboratory standard.

Appendices

OSHA reviewed the appendices to each of its substance-specific health standards and made the following minor changes necessary to align the appendices with their GHS-harmonized standards.

The language in Appendix B, ''Employee Standard Summary,'' chapter XI, ''Signs,'' in both the general industry and the construction standards for lead (§ 1910.1025 and § 1926.62, respectively) has been made consistent

with the language in their regulatory texts.

In Asbestos § 1910.1001, Appendix F, ''Work Practices and Engineering Controls for Automotive Brake and Clutch Inspection, Disassembly, Repair and Assembly (Mandatory),'' a reference to paragraph (j)(4) of the standard has been redesignated as paragraph (j)(5) to be consistent with the changes in the regulatory text for § 1910.1001. No changes were made to the construction Asbestos standard § 1926.1101, as none were needed.

Safety Data Sheets

OSHA has changed the term ''material safety data sheets'' when it appears to ''safety data sheets'' in both the substance-specific health standards and their appendices. As discussed above, this change reflects the GHS terminology.

Compliance Dates for Substance-Specific Health Standards

OSHA proposed to require implementation of all but one of the revisions to the HCS in three years following completion or promulgation of the final rule. Training was proposed to be required in two years. OSHA noted that during the transition period, an employer could be in compliance with either the current HCS or the revised HCS (the final rule), but there could not be a lapse in compliance. For the final standard, OSHA has decided to align implementation of GHS with the final implementation of GHS in the EU for labeling and SDSs. A full explanation of the information and comments and the Agency's reasoning is set out above in this section.

The proposed changes to the substance-specific health standards required compliance with the HCS, thus incorporating the proposed compliance dates for the revised HCS. One commenter suggested that the proposed sign and label updates be done in accordance with the facility's normal replacement schedule (Document ID #0376). OSHA finds that this is too indefinite a period, because it essentially leaves the compliance date in the hands of each employer. OSHA has concluded that the administration of HCS programs by employers and the communication and comprehension of the hazards by employees will be most effective if the requirement for completion of changes for the substance-specific health standards is the same as for all other chemicals. In a sense, this is just another example of the consistency that was approved by so many of the commenters and hearing witnesses.

Thus, the final rule keeps the compliance dates for the new substance-specific health standard requirements in line with those for the revisions to the HCS. Employers must be using new labels for contaminated clothing and waste and debris by June 1, 2015, the date by which manufacturers and importers must comply with the labeling and SDS requirements of the revised HCS. Employers must post the new signs by June 1, 2016, the same date by which employers must also update their hazard communication plans for any new hazard information they receive as a result of the final rule. In the meantime, as with the revised HCS, employers must comply with either the old or new labeling and signage requirements. Provisions to this effect are inserted for each substance-specific standard in this final rule.

Safety Standards

OSHA proposed modifying safety standards that either directly reference the HCS or provide information pertinent to the SDSs, in particular regarding the storage and handling of chemicals. As noted above, many commenters supported standardizing physical hazard criteria across all applicable OSHA standards (Document ID #0034, 0104, 0105, 0155, 0170, 0171, 0313, 0324, 0327, 0328, 0329, 0336, 0338, 0359, 0365, 0376, 0382, 0395, 0405, 0408, 0410, and 0494 Tr. 91, 162). For example, the Compressed Gas Association (CGA) (Document ID #0324) stated:

> CGA agrees with the harmonization to GHS to align the definitions of the physical hazards to the requirements of the GHS categories in safety standards for general industry, construction, and maritime standards, which either directly reference the Hazard Communication Standard * * * or provide information pertinent to the SDS.

However, some other commenters, and even some who supported applying physical hazard criteria across all standards, raised concerns about storage and handling requirements; degree of impact; potential effects on the scope of the Process Safety Management of Highly Hazardous Chemicals (PSM) standard; and potential conflicts with widely accepted consensus standards (Document ID #0038, 0077, 0104, 0163, 0329, 0335, 0336, 0339, 0366, 0370, 0381, 0383, 0393, 0399, 0414, 0500, 0514, 0530, 0643, 0494 Tr. 91, 162, and 0497 Tr. 81–84).

OSHA agrees with the commenters who supported standardizing physical hazard criteria and is doing so except in some standards, such as OSHA's electrical standards, where conflicts with referenced consensus standards make harmonization inappropriate at this time. OSHA proposed to:

- Incorporate the current HCS definitions of flammable liquid and gas into PSM and health hazard into Hazardous Waste Operations and Emergency Response (HAZWOPER) standards;
- Modify the Welding standard (§ 1910.252) requirements on labeling welding consumables to be consistent with GHS modifications to HCS;
- Amend paragraphs on flammable and combustible liquids to conform categories, terminology, flashpoints (FP), and boiling points to the GHS modifications to HCS;
- Incorporate the modified-HCS definition of flammable aerosols into the Flammable and Combustible Liquids standard, § 1910.106. (In § 1910.106, OSHA is also correcting a rounding error in the conversion from 12 feet to meters. The change is from 3.648 meters to 3.658 meters); and
- Update the acceptable methods for determining flashpoints; but
- Leave unchanged electrical standards in Subpart S for general industry and Subpart K for construction, and explosive standards for general industry (§ 1910.109) and for construction (§ 1926.914).

Commenters overwhelmingly supported ensuring consistency in OSHA standards, while maintaining scope of coverage. (Document ID # 0049, 0050, 0077, 0105, 0123, 0145, 0163, 0170, 0313, 0324, 0327, 0328, 0351, 0359, 0365, 0376, and 0494 Tr. 91, 162). Organization Resource Counselors (ORC) (Document ID # 0494 Tr. 91) testified:

> ORC supports concurrent harmonization of hazard definitions in most OSHA standards. ORC agrees with OSHA's proposal to harmonize hazardous communication components across most other OSHA standards in this rulemaking. ORC believes this is the most efficient way to address this necessary step in ensuring consistent hazard information and eliminating conflicting requirements.

Many comments to the ANPR and the NPRM supported OSHA exempting certain standards such as electrical and explosive standards from harmonization at this time (Document ID # 0047, 0075, 0076, 0104, 0113, 0145, 0163, 0328, 0330, 0336, 0370, 0393, and 0408). For example, the standards in Subpart S contain requirements such as internal design criteria that, if changed, would impact their scope. OSHA's reasons for excluding these standards are explained below. In testimony at the hearing, the ACC (Document ID # 0494 Tr. 162) agreed, stating:

We agree with this approach and therefore would expect that there would be no impact on electrical area classification, facility [s]iting, mechanical integrity, electrical classification, storage quantities, unloading and storage location, ventilation requirements, spill protection, grounding and bonding, tank and vessel design, interlocks and safety devices and process hazard analysis.

As discussed in detail below, in the final rule PSM retains its current scope; HAZWOPER's definition of ''health hazard'' is modified; the definitions in the Flammable and Combustible Liquids standards are aligned with the GHS modifications to HCS; Welding, Cutting and Brazing labeling requirements were also modified to be consistent with HCS; and a few technical amendments have been made to other safety standards that currently use the term ''combustible'' in order to keep their scope the same. Also, no changes were made to standards that OSHA proposed to exclude from this rulemaking.

PSM

PSM standards for general industry and construction reference the HCS for their scopes, which are currently set forth in § 1910.119(a)(1)(ii) and § 1926.64(a)(1)(ii) as covering a process which involves a flammable liquid or gas (as defined in § 1910.1200(c) [§ 1926.59(c)] on site in one location, in a quantity of 10,000 pounds (4535.9 kg) or more, followed by the listed exceptions in the paragraph.

If OSHA did not modify this provision in this rulemaking, the scope of PSM would expand since the HCS's definition of flammable liquid changes from liquids with a flashpoint below 100 °F (37.8 °C) to the new GHS definition of liquids with a flashpoint at or below 199.4 °F (93 °C) (though, as discussed above, the scope of the HCS is unaffected). Keeping the reference to the HCS definition would mean that many more processes would have been covered by the PSM standards than when those standards were promulgated. OSHA does not intend to expand the scope of the PSM standards. Therefore, to maintain the scope of those standards, OSHA proposed to modify the language in the scope paragraphs § 1910.119(a)(1)(ii) and § 1926.64(a)(1)(ii) to read:

A process which involves a Category 1 flammable gas (as defined in § 1910.1200(c)) or flammable liquid with a flashpoint below 100 °F (37.8 °C) on site in one location, in a quantity of 10,000 pounds (4535.9 kg) or more * * *

In other words, for PSM, ''flammable gas'' includes Category 1 flammable gases and liquids only if they have flashpoints below 100 °F (37.8 °C) to be consistent with the criteria specified in the current HCS.

Commenters who considered the issue differed on what should be done (Document ID #0324, and 0402). For example, ACC, in responding the NPRM, supported OSHA's approach (Document ID # 0393). ACC noted that OSHA's proposed regulatory language for § 1910.119, the general industry PSM, appropriately reflected the new cut-off without changing the scope of the regulation (Document ID #0393). However, CGA requested that OSHA update paragraph (a)(1)(ii) of § 1910.119 to use GHS Category 1 flammable liquids as a cutoff for PSM coverage, stating, ''This would maintain consistency throughout the OSHA standards and harmonization with the GHS'' (Document ID #0324). The Society of Chemical Manufacturers and Affiliates (SOCMA) (Document ID #0402) was concerned that the change in the flashpoint trigger for flammable liquids from ''the current 100 °F to the new 140 °F * * * would significantly expand the number of products subject to OSHA 1910.106 (flammable liquids), and OSHA 1910.119 (Process Safety Standards).''

While OSHA agrees with CGA that using GHS Category 1 flammable liquids would maintain consistency throughout the OSHA standards, to do so would change the scope of the PSM standard by making it applicable only to flammable liquids with flashpoints below 73 °F (23 °C). This would significantly narrow the scope of PSM and lessen worker protection by eliminating from coverage flammable liquids with flashpoints from 73 °F to below 100 °F. However, to set the coverage of PSM to 140 °F (flammable liquid categories 1, 2 and 3 which require the hazard warning ''flammable'' to appear on labels), as SOCMA noted, would expand the coverage beyond the scope of the original standard.

OSHA has concluded that setting the flashpoint below 100 °F (37.8 °C), the previous HCS level, properly maintains the scope of the PSM standards as they were promulgated. As explained in the proposal, OSHA's approach to the other affected standards is to ''modify provisions of the standards that reference the HCS definitions to maintain coverage or consistency with the modified HCS'' (74 FR 50404, Sept. 30, 2009). It is beyond the scope of this rulemaking to consider whether, as a substantive matter, the scope of the PSM standards should be changed. Thus, OSHA is neither increasing nor decreasing the scope of the PSM standard; consequently, the same products in the same quantities will be covered. The final rule adopts the proposed changes to the PSM standards noted above.

HAZWOPER

In the NPRM, OSHA updated the definition of health hazard in its HAZWOPER standards, § 1910.120(a)(3) for general industry and § 1926.65(a)(3) for construction, so that the terminology is aligned with the GHS health hazards in § 1910.1200, Appendix A. The final rule retains the proposed definition.

In proposing this change, OSHA was concerned that some of the terminology in HAZWOPER, such as neurotoxin and nephrotoxin, which were partly defined by reference to the HCS, would no longer be consistent with the GHS-modified HCS. For consistency, the proposal removed such terms from HAZWOPER and are now subsumed within the HCS specific target organ toxicity category, thus maintaining the same hazard communication requirements in both HAZWOPER and HCS. By updating the definition of ''health hazard'' in the HAZWOPER standards to clearly reference HCS, employers will have the proper reference to HCS and, in there, the proper guidance on how to classify the health hazards. OSHA received no contrary comment, and the final rule adopts the definition of health hazard as proposed.

The ACC requested that OSHA clarify how the HAZWOPER standards would be affected by OSHA's adoption of the GHS flammable and combustible liquid classifications in § 1910.106, § 1926.152, and § 1926.155 (Document ID # 0393 and 0530). ACC seems to be asking why OSHA did not reference the new definitions (GHS categories) of flammable liquids in HAZWOPER. OSHA believes the HAZWOPER standards would not be directly affected by the GHS-harmonized categories of flammable liquids, and therefore ACC's concern is misplaced. The HAZWOPER standards are program standards, and they do not contain any specific references to flammable or combustible liquids. It is true that the HAZWOPER standards state that all requirements of Parts 1910 and 1926 of CFR title 29 apply to hazardous waste and emergency response (§ 1910.120(a)(2) and § 1926.65(a)(2)). Thus, where HAZWOPER-covered employees are responding to an emergency situation where flammable liquids have been stored or need to be temporarily stored during clean-up, the flammable liquid standards might apply. OSHA believes that even in those situations, GHS harmonization of flammable liquids will

have little or no effect on the HAZWOPER standards, because the substantive requirements of these standards have not significantly changed.

Welding, Cutting and Brazing—General Requirements

OSHA is harmonizing the requirements in the Welding, Cutting and Brazing standard, § 1910.252, by adding a Hazard Communication paragraph and bringing in line with the GHS and OSHA's substance-specific health standards the terminology in the labeling requirements for filler metals and fusible granular materials, filler metals containing cadmium, and fluxes containing fluorine compounds.

The final rule retains the proposed text of the Hazard Communication paragraph at § 1910.252(c)(1)(iv). Similar to the substance-specific standards, the welding standard's hazard communication paragraph requires employers to include welding contaminants in a program established to comply with the HCS (§ 1910.1200). Also, similar to the substance-specific standards, OSHA has added a date paragraph requiring employers to be using new labels by June 1, 2015, the date by which manufacturers and importers must comply with the labeling and SDS requirements of the revised HCS.

In addition to adding the general Hazard Communication paragraph, OSHA reorganized some of the paragraphs in § 1910.252 so as to place the general reference to HCS in the correct position in the standard, § 1910.252(c)(1)(iv). To accomplish this, OSHA moved the ''Additional considerations for hazard communication in welding, cutting, and brazing,'' including filler and fusible granular materials, materials containing cadmium, and materials containing fluorine compounds, from paragraphs (c)(1)(iv)(A) through (C) to new paragraphs (c)(1)(v)(A) through (D).

The proposal inserted a cross reference to § 1910.1200 in the welding standards hazard determination section. In addition, as with the substance-specific standards, the proposal deleted specific label language requirements for welding materials containing cadmium and fluorine and instead listed specific health endpoints to be considered in the classification.

OSHA received one comment on the proposed changes from the Gases and Welding Distributors Association, Inc. (GAWDA). While GAWDA generally supported OSHA's rulemaking effort, GAWDA requested that OSHA change ''suppliers'' of welding materials to ''manufacturers'' in § 1910.252(c)(1)(v)(A) of the proposal (Document ID # 0388). GAWDA stated the term ''supplier'' is undefined and might include different entities in the supply chain; furthermore, elsewhere OSHA places the responsibility of hazard determination on manufacturers, importers, and distributors. However, OSHA would like to point out that the term ''supplier'' is used in the current standard, which requires suppliers to determine the hazards in § 1910.252(1)(c)(iv): ''The suppliers of welding materials shall determine the hazard, if any, associated with the use of their materials in welding, cutting, etc.'' OSHA assumes that ''suppliers'' will continue to use the same method that they are currently using to determine the hazards of their materials. To change this term could result in a substantive change in the scope of this standard and would be beyond the scope of this rulemaking. Therefore OSHA will retain the word ''suppliers'' as proposed.

In addition, as discussed in the preamble to the proposal, *See* 74 FR 50417 (Sept. 30, 2009), current § 1910.252(c)(iv) does not merely require suppliers to determine the hazards of their products, but also to ensure that labels properly convey those hazards. A requirement that a supplier only determine the hazard of its products is of little value if they do not also convey information about those hazards on to the persons who use it. The final rule provides additional clarity that suppliers of welding products covered by the standard label as well as determine the hazard.

The changes to this standard were predicated on achieving consistency with the GHS modifications to HCS and other OSHA substance-specific standards, and OSHA has concluded that the modifications as proposed and as explained in the previous paragraphs will effectuate harmonizing the standard's terminology with HCS. In addition, this action also contributes to internal consistency by making the Welding, Cutting, and Brazing standard similar to the substance-specific health standards.

Flammable and Combustible Liquids

OSHA proposed to align the definitions of flammable and combustible liquids in both the general industry and construction standards to conform to the GHS modifications to the HCS. In particular, the proposal changed the definitions of flammable liquid categories and deleted the term and definition of combustible liquids (*See* Table XIII–6 for comparison of the GHS-modified HCS definitions and the current flammable and combustible definitions that were contained in 29 CFR 1910.106 and 29 CFR 1926.155). OSHA has concluded that the proposed changes to the § 1910.106 and § 1926.155 definitions are reasonably necessary and appropriate and carried them forward into the final rule. In addition, to essentially maintain the scope of the standards, OSHA proposed, and is maintaining in the final rule, the addition of the flashpoint cut-off value where the GHS flammable liquid categories overlapped with the current HCS classes. The Alliance of Hazardous Materials Professionals and David Levine of Product Safety Solutions agreed, stating: ''The elimination of the term 'combustible' and substitution of actual flash point data provide a more meaningful definition in the affected standards'' (Document ID # 0313 and 0327).

OSHA proposed to drop the current rules' classifications of flammable and combustible liquids in favor of the GHS flammable liquid classifications. This meant that all liquids under the proposal would fall into GHS flammable liquid Categories 1 through 4, and that the term ''Combustible Liquids'' in §§ 1910.106, 1910.107, 1910.123, 1910.125, 1926.152, and 1926.155 was proposed to be deleted since the GHS does not have a hazard class titled ''Combustible liquids.'' However, the GHS does require the hazard statement ''combustible liquid'' on the label for Category 4 Flammable liquids (flashpoint greater than 60 °C (140 °F) but not greater than 93 °C (199.4°F)).

In addition, the current general industry Spray Finishing standard, § 1910.107, relies on the current § 1910.106 definition of Class IIIB liquids (liquids with a flashpoint over 93 °C). Therefore the proposal amends § 1910.107 to replace its use of the term ''combustible liquids,'' which has no corresponding GHS category, with the phrase ''Liquids with a Flashpoint Greater than 93 °C (199.4 °F).'' With the new terminology, the protection provided by the original standards remains the same.

OSHA believed that most of the proposed changes in the definitions were not significant. The move to GHS categories entails nominal changes to the flashpoint values for flammable and combustible liquids from 22.8 °C (73 °F) (current Class IA/B cut-off) to 23 °C (73.4 °F) (GHS Category 1/2 cut-off) and from 93.3 °C (200 °F) (current Class IIIB cut-off) to 93 °C (199.4 °F) (GHS Category 4). OSHA believes these changes in flash point represent simple rounding to the closest significant value

and that they would have no significant effect on the scope of its standards or on employee safety. ACC agreed with OSHA, stating that ''the elimination of the term 'combustible liquid' in § 1910.107 does not significantly change the requirements of the standards and should not adversely affect industry's ability to comply with the standard'' (Document ID #0393). OSHA has concluded these new whole numbers are minute changes and that the rounded numbers coincide with GHS, are easier to understand and remember, and therefore will improve communication of hazards.

However, OSHA requested comment in the proposal on one change that was potentially significant. Under the proposal, the boiling points used to define the threshold for the current Flammable Class IA in § 1910.106 shifted from the cut-off value of 37.8 °C (100 °F) to a cut-off value of 35 °C (95 °F) for GHS Category 1. Likewise, the boiling points in the proposed definition of Flammable Class IB (§ 1910.106) shift from equal to or greater than (≥) 37.8 °C (100 °F) to greater than (≥) 35 °C (95 °F) in GHS Category 2 (*See* Table XIII–6). The Agency believed the changes would be necessary to make OSHA standards internally consistent and consistent with the GHS modifications to HCS. However, as discussed in the NPRM, OSHA was concerned that changing the boiling point cut-off for the highly flammable liquids classified as Flammable IA could, under the GHS modifications to HCS, lead to a subset of these chemicals being classified as GHS Category 2 Flammable Liquids. Since some of the storage and handling requirements are based on the hazard category, the proposal would allow a facility to use larger tanks to store liquids with boiling points between 37.8 °C (100 °F) and 35 °C (95 °F). OSHA was concerned that this practice could decrease safety. OSHA reviewed the properties related to the flammability of approximately 900 chemical substances (754 liquids) listed in the *CRC Handbook of Chemistry and Physics* [85th edition]. Approximately 1 percent of this list of flammable liquids would result in a reclassification from the current Flammable and Combustible Liquids Standard Class IA to GHS Category 2. While this is a small percentage of the total flammable liquids, it represents approximately 15 percent of the Flammable and Combustible Liquids Standard Class IA liquids on this list. OSHA was concerned that this was an instance where the benefits of harmonization could have been in conflict with the measure of safety currently provided and therefore requested comments on this issue.

Most agreed with OSHA that resulting reclassifications of liquids with borderline flashpoints from the old Class IA to the GHS Category 2 was not significant (Document ID #0313, 0324, 0327, 0328, 0338, 0352, 0365, 0366, 0370, 0376, 0382, 0383, 0393, 0405, 0408, 0410, and 0494 Tr. 56). National Association of Chemical Distributers (NACD) stated that ''Several NACD members handle flammable liquids under Category 1 and 2. However, the proposed changes would result in few operational changes'' (Document ID # 0341). Several commenters pointed out that aligning the definitions for flammable liquids is consistent with the single worldwide definition for these hazards (Document ID #0313 and 0327). ORC (Document ID #0370) stated:

> ORC agrees that the methods OSHA proposes to classify flammable liquids Category 1and 2 and flammable aerosols are similar enough to the current definitions that substances that are currently regulated by OSHA would continue to be regulated and that few, if any, changes would result in a shift in regulatory coverage.

The National Fire Protection Association (NFPA) (Document ID #0366 and 0497 Tr. 56) stated:

> NFPA agrees with OSHA's assessment regarding the slight adjustment resulting from the change in criteria for flash point and boiling point for flammable liquid categories when applying the GHS criteria. NFPA believes the overall impact of the changed flash point and boiling point will be negligible.

The American Petroleum Institute (API) urged OSHA to be consistent across all standards (Document ID #0376). Further, the ACC commented that in reference to the boiling point cut-off for Category 1 and 2 flammable liquids, they believe the language (in the NPRM) is sufficient to reflect the cut-off without changing the scope of the regulation (Document ID #0393).

However, some commenters expressed concern that the shift in flammability criteria would require facilities to modify their storage facilities to maintain compliance with § 1910.106, and consequently storage receptacles would have to be smaller, leading to less storage and greater costs (ISSA, Document ID # 0399). That concern is misplaced because the change from OSHA's old flammable and combustible classes to GHS categories involves a *lowering* of the boiling point cut-offs by 2.8 °C (5.04 °F), so that employers will still be able to use current handling and storage practices affected by the change. Likewise, current storage and handling practices for chemicals whose boiling points fall between 37.8 °C and 35 °C would still be allowed under the proposal. SOCMA commented that changing the definition would expand the number of products subject to § 1910.106 (Document ID #0402). That is also not correct. Due to the rounding of GHS flashpoints, cut-offs are slightly less stringent (*See* Table XIII–6) and no new chemicals would be regulated.

TABLE XIII–6—FLAMMABLE LIQUID DEFINITIONS

GHS			Flammable and combustible liquids standard (29 CFR 1910.106)		
Category	Flashpoint °C (°F)	Boiling point °C (°F)	Class	Flashpoint °C (°F)	Boiling point °C (°F)
Flammable 1	<23 (73.4)	≤35 (95)	Flammable Class IA	<22.8 (73)	<37.8 (100)
Flammable 2	<23 (73.4)	>35 (95)	Flammable Class IB	<22.8 (73)	≥37.8 (100)
Flammable 3	≥23 (73.4) and ≤60 (140)		Flammable Class IC Combustible Class II.	≥22.8 (73) and <37.8 (100). ≥37.8 (100) and <60 (140).	.
Flammable 4	>60 (140) and ≤93 (199.4).		Combustible Class IIIA	≥60 (140) and <93.3 (200).	
None			Combustible Class IIIB	≥93.3 (200)	

The American Society of Safety Engineers (ASSE) agreed with OSHA's assessment of the storage issue. ASSE noted that the differences in boiling points from the original § 1910.106 to the GHS Categories could increase the number of gallons allowed to be stored in rooms and cabinets as well as the size of containers for certain liquids. However, in its opinion, the ''slightly'' increased boiling point would be of ''little significance'' (Document ID #0336). Therefore, based on the analysis discussed above and the comments received, OSHA has concluded that the shift in boiling point and the minor changes in temperatures and the re-categorizing of flammable liquids are insignificant and will have a negligible impact on the protection provided by the standards that use these terms.

Most commenters supported OSHA's proposal to incorporate the GHS definitions for flammable liquids into its safety standards (Document ID #0313, 0327, 0328, 0338, 0365, 0376, 0405, 0408, and 0410). Some stressed the ''consistency'' benefits from harmonization (Document ID #0338, 0405, and 0408). ASSE (Document ID #0336) said:

> In response to OSHA's proposal to eliminate the term ''combustible liquid'' in 29 CFR 1910.106, 1910.107, 1910.123, 1910.124, 1910.125, and 1926.155 for liquids with a flashpoint above 100 degrees F., ASSE believes this list of standards is appropriate. * * * However, ASSE urges OSHA to remove the term ''combustible liquid'' for all liquids and use the GHS criteria for all flammable liquids.

The National Paint and Coatings Association (NPCA), in supporting the removal of the term ''combustible liquid,'' noted that it was consistent with DOT (Document ID #0328).

Although there was considerable support for the changes OSHA made in the proposal to the flammable and combustible liquid categories, OSHA also received comments suggesting that the deletion of the ''combustible'' designation and the combining of NFPA Class 1C flammable and Class II combustible liquids into new Category Flammable 3, would lead to confusion among engineers, employers, and employees, which could result in potential accidents (Document ID #0344, 0366, 0381, 0399, 0402, 0498, 0500, 0514, and 0643). In addition, some commenters questioned whether the OSHA standards that address flammable liquids that are not covered by GHS (Combustible Class IIIB) are best handled by replacing the term ''combustible'' with a quantitative definition so as to maintain their coverage (Document ID #0336, 0366, and 0497 Tr. 56–58 and 68).

Some organizations, though they supported the proposed changes in general, had some specific concerns, particularly with how the OSHA GHS harmonization works with other national standards, including consensus standards. Clariant Corporation opined that eliminating the term ''combustible liquid'' will likely cause some confusion since it is still used by NFPA and DOT but urged OSHA to adopt the GHS criteria to maintain global consistency (Document ID #0383). However, OSHA points out that, as mentioned above by NPCA, the GHS criteria are consistent with DOT. The American Federation of State, County and Municipal Employees (AFSCME) favored OSHA's GHS harmonization, but sought clarification or additional guidance on how secondary labeling systems such as NFPA's 704 Diamond or the Hazardous Materials Information System (HMIS) would be used once GHS was in effect (Document ID #0414).

NFPA testified that the GHS categories would conflict with NFPA's established hazard ratings in NFPA 704, which has been in effect since the 1950s. NFPA recommended that the term ''combustible liquid'' not be deleted (Document ID #0497 Tr. 59–64). In addition, NFPA expressed concern that there may be additional confusion since the rating system in NFPA 704 expresses the most hazardous as a ''4'' while the GHS classification criteria expresses the most hazardous as Category ''1''. The International Fire Marshals Association (IFMA), echoing the sentiments of the NFPA, agreed that users have been relying on the NFPA 704 Hazard Rating and the Hazardous Material Information System (HMIS) systems for a long time and would be confused by the change (Document ID #0497 Tr. 80–84).

These commenters were concerned that the proposed realignment of the flammable liquid categories would result in confusion among employees, emergency responders, authorities having jurisdiction, and others who have been used to the distinction between flammable and combustible liquids (Document ID #0344, 0366, 0381, 0399, 0402, 0498, 0500, 0514, 0643, and 0497 Tr. 56–58). NFPA (Document ID #0366) stated:

> NFPA is also concerned with the elimination of the ''combustible liquids'' classification that will occur with the adoption of GHS as we believe there will be considerable confusion among the workers who have been instructed to take specific precautions for various liquids based on whether they were identified as ''flammable or combustible.'' Further, we believe that the elimination of the ''combustible liquid'' classification may cause confusion among emergency responders and authorities having jurisdiction, who have until now understood that ''flammable liquids'' can be expected to be ignitable at ambient temperatures, while ''combustible liquids'' typically require some degree of heating to reach their flash point temperatures. This lack of definition may also be an issue, albeit to a lesser extent, among designers who have been trained to apply certain fire protection measures to ''flammable liquids'', but not to ''combustible liquids.'' The immediate recognition that has existed in the workplace for decades may be removed by the proposed rule; NFPA cautions OSHA that confusion among workers has the potential to be more significant than OSHA has acknowledged.

See also Document ID #0497 Tr. 56–58.

As an initial matter, OSHA notes liquids with a flashpoint greater than or equal to 60 °C (140 °F) and less than 93.3 °C (200 °F), which are currently classified as ''combustible,'' will be labeled as ''combustible liquids'' under the final rule. Thus this minimizes the potential for the confusion that NFPA suggests for these chemicals.

In any event, OSHA believes that there is currently confusion and inconsistency in this area. For example, OSHA standards have several cutoff values for flammable and combustible liquids. In OSHA's general industry standard at § 1910.106, 100 °F is the cut-off between flammable liquids and combustible liquids, but in construction, § 1926.155, 140 °F is the cut-off between flammable and combustible. Even the NFPA's standards are confusing. In NFPA 30, the hazard levels are structured from Ia/b/c to III b, with Ia being the highest, while in NFPA 704 the hazard levels range from 1 to 4, where the highest hazard category is 4 and the lowest is 1. NFPA classification and rating systems have been in existence since the 1950s and while the NFPA rating system is widely used, it is still not universally used or understood. Testimony from Mr. Frederick of the United Steelworkers indicated that NFPA is a good quick reference although (he believed) it does not cover all hazards, but it is used to alert workers that they must look elsewhere for additional information (Document ID #0499 Tr. 155–169).

In addition, OSHA reviewed randomly chosen SDSs for liquids classified under the current standard to determine how NFPA ratings correlated to hazard warnings. As shown in Table XIII–7, the hazard warnings were inconsistent, while the MSDSs were all technically correct for physical properties. For example, the hazard warning for flammable liquids with a

NFPA rating of 3 ranges from ''Flammable Liquid'' to ''Extremely Flammable'' to ''Severe.'' Notably, cyclohexanone, currently classified as a combustible liquid under § 1910.106, bears the hazard statement ''Flammable.''

TABLE XIII–7—MSDS COMMUNICATIONS OF FLAMMABLE LIQUID HAZARD WARNINGS

Docket #	Chemical name	Flashpoint	NFPA rating listed	Hazard warning
0565	Toluene	40.7 °F	3	Flammable Liquid
0566	Turpentine	95 °F	3	Flammable Liquid
0570	Aliphatic Hydrocarbons	120 °F	None listed	Flammable Liquid
0571	Reagent N Hexane	−22 °F	3	Extremely Flammable
0567	Paint Thinner	104 °F	2	Combustible
0557	Reagent Alcohol	55 °F	3	Severe (flammable)
0599	Cyclohexane	0 °F	3	Extremely Flammable
0560	Cyclohexanone	111 °F	2	Flammable

OSHA believes that this rulemaking will promote greater harmonization of hazard warnings in the future. Now, when a chemical falls in a particular flammable liquid hazard category, the HCS requirements will dictate the appropriate hazard warning. At least one comment alleges this has already happened in the United States. Dr. Michele Sullivan pointed out that the U.S. Department of Transportation (DOT) is already aligned with the GHS physical hazard criteria (the GHS criteria for physical hazard was based on the DOT physical hazard criteria); thus is already aligned with GHS flammable liquid criteria. Therefore, OSHA is aligning with DOT with this rulemaking (49 CFR 173.120 and Document ID #0382).

Neither the proposal nor final rule prohibits the use of NFPA or HMIS rating systems. They do not prohibit the use of NFPA definitions for employers taking preventive measures in designing facilities or implementing fire protection systems such as automatic sprinklers to ensure a safer situation. OSHA's requirements, even with the substitution of the term ''flammable'' for ''combustible,'' do not prohibit safer workplace designs or installations. Furthermore, OSHA expects that engineers and other professionals will use the actual flashpoints and other properties of the liquids themselves in design and installation of controls rather than a designation of a liquid as ''flammable'' or ''combustible.'' IFMA agreed with this premise (Document ID #0497 Tr. 84–85). In any event, even if the engineer, facility designer, or employer is somehow misled by § 1910.106's use of the term ''flammable,'' which has traditionally connoted a higher level of hazard, the result should be an error on the side of safety, rather than of less protection.

During the public hearings, ORC Worldwide commented on OSHA's review of the standards affected by this rulemaking, stating support for the ''concurrent harmonization of hazard definitions in most OSHA standards.'' However, ORC also ''agrees with member concern that changes to definitions in § 1910.106, Flammable and Combustible Liquids, while not increasing the scope of the standard, may cause confusion to workers who are familiar with NFPA nomenclature for these materials'' (Document ID #0494 Tr. 91–92). OSHA asked ORC to elaborate on this concern and provide support for their testimony. In response, ORC (Document ID #0643) provided two hypothetical situations it believes show that confusion over the realignment of flammable and combustible liquid categories could be significant:

> Consider an engineer who is designing a new warehouse. (New) Category 3 liquids are to be stored therein, and these are liquids which were previously called ''combustible.'' Engineer does not design an electrical classification for the area. He does not realize that the new category may also include some liquids which are flammable. Because of this design outage, an electrical issue causes a fire and the warehouse burns down.
>
> Consider a dry cleaning business that is using a (new) Category 3 solvent and does not include automatic sprinklers because the team is familiar with this solvent as being ''combustible'' under the previous NFPA definitions. A different, more effective solvent is proposed, also (new) Category 3, and is accepted as being ''similar''—the manufacturer reassures them that the new solvent is in the same flammability category as the previous one. But this one is indeed flammable and would require automatic sprinkler protection under NFPA rules. A fire starts with the new solvent, and because no automatic sprinklers exist onsite, the dry cleaner burns down.

OSHA thanks ORC Worldwide for their testimony and for providing examples of where revisions to standards affected by this rulemaking might cause confusion. With regard to the situations presented by ORC, OSHA understands that the engineer designing the sprinkler system would be required to follow local and state building codes, along with NFPA codes or other building codes, such as NFPA 1 (Fire Code), NFPA 13 (Standard for the Installation of Sprinkler Systems), NFPA 30 (Flammable and Combustible Liquids Code), NFPA 32 (Standard for Dry Cleaning Plants), NFPA 5000 (Building Construction and Safety Code), and the International Building Code (published by the International Code Council) as well as any OSHA standards that would apply.

The design of a system is not predicated on one physical property, and a prudent engineer or sprinkler designer should be aware that there are special requirements for the storage of combustible and flammable liquids. The codes and standards mentioned above all refer to NFPA 30 for requirements related to the storage and use of flammable and combustible liquids. There are restrictions on maximum container size, maximum storage height, and maximum total quantity stored based on flashpoint.

With regard to the change in solvent used at a dry cleaning facility, the argument remains the same as for the design engineer mentioned above. The flashpoint determines the classification of the chemical. The automatic sprinkler system design would be based on the flashpoint and not the class of chemical being used. OSHA concludes that commenters' concerns about confusion are not well founded and has decided to retain the GHS definition for flammable liquids as proposed in the final rule.

Two commenters, Procter & Gamble and ISSA, believed OSHA was adopting the 140 °F flashpoint cut-off as the definition of a flammable liquid and that this would conflict with the current flashpoint cut-off of 100 °F in § 1910.106 (Document ID #0381 and 0399). Procter & Gamble, arguing that the GHS was designed for hazard communications and not intended to regulate design criteria and that aligning

the GHS criteria for flammable liquids in OSHA's safety standards would have unintended consequences (Document ID #0381), offered OSHA two options:

Option 1: Leave the current OSHA definition of flammable liquids unchanged. This is easy, clear, and no-cost to U.S. industry. Option 2: In principle, GHS is a labeling and hazard communication system, and was not intended to regulate the design and operation of facilities. OSHA 1910.106, by comparison, is a risk management regulation used in such design and operation. If OSHA adopts the GHS Building Block of 140 °F, leave the parallel definition of 100 °F intact in 1910.106. This dual system will create some confusion, but will minimize the negative effects listed above.

As an initial matter, Procter & Gamble misunderstood how OSHA incorporated the GHS flammable liquid definitions into the safety standards. This change was made only to align terminology. In fact, OSHA agrees that the GHS was not intended to regulate design criteria. Therefore, OSHA proposed to leave the standard's design criteria intact by using the actual measurable flashpoint as the defining criterion. The proposal, adopted by the final rule, is similar to Procter & Gamble's Option 2 and accomplishes both harmonization with GHS and retention of OSHA's long-established and effective risk management practice.

Finally, there were concerns that realigning the flammability criteria could affect contracts. Phylmar Regulatory Roundtable (PRR), which did not oppose OSHA's alignment of definitions of flammable and combustible liquids with the GHS categories, was concerned the reclassification of chemicals may cause conflicts in contracts with customers. PRR stated that the contracts require specifications in products manufactured, engineering controls, personal protective equipment, and specified instructions. PRR claimed that in such a situation the manufacturer by contract is permitted no deviation from the contract or process standards (Document ID #0514). However, as stated above, OSHA has not changed the scope or the requirements of its standards. Therefore, OSHA has concluded there is unlikely to be any interference with contracts. Moreover, where distinctions must be made in the OSHA requirements between the former Class 1C flammable liquids and Class II combustible liquids, the OSHA requirements have specified such distinctions with specific flashpoints. The contents and scopes of the regulatory paragraphs are not affected by GHS reclassifications or terminology changes, nor are OSHA's ventilation, respiratory protection, and personal protective equipment standards. In addition, OSHA did not change standards, like its electrical standards, that address internal design criteria.

OSHA has decided to remain consistent with GHS and not create additional flammable liquid categories. However, § 1910.106(18)(ii)(b) defines Combustible Class IIIB liquids as liquids with flashpoints at or above 200 °F (93.3 °C). While Class IIIB liquids are not included in the scope of § 1910.106, there is no such exemption in the Spray Finishing standard, § 1910.107 (OSHA letter of interpretation, Aug. 15, 2006). In order to preserve coverage in standards such as Spray Finishing, these liquids are now called ''Liquids with a Flashpoint of >93 °C (199.4 °F).'' Similar to § 1910.106, the use of the flashpoint cut-off is the best way to stay as close to the GHS and maintain scope and consistency within the standards. The Soap and Detergent Association (SDA) and the Consumer Specialty Products Association (CSPA) in a joint comment stated that OSHA should ''correct'' § 1910.107(e) and (e)(4) and § 1910.124(c)(2) to read ''Liquids with a Flashpoint at or below 199.4 °F'' to be consistent with the GHS criteria (Document ID #0344). However, if OSHA were to adhere strictly to GHS in this instance and drop the higher flashpoint category, protection from this hazard would be lost and safety compromised.

Several commenters addressed this issue. ASSE stated that their ''members do not see the need for the fifth category of 'Flammable Liquids Over a Flash Point of 93.3 °C.' Specific flash point criteria should be used'' (Document ID #0336). NFPA expressed general concern about the elimination of the Class IIIB liquids by the adoption of the GHS categorization system, though they acknowledged that OSHA had proposed to extend liquids as ''flammable liquid with flash point greater than 93 °C'' (Document ID #0366 and 0497 Tr. 56–58). The point was further clarified upon questioning at the hearing where NFPA agreed that by extending the liquids to flashpoints greater than 199.4 °F, OSHA was providing the coverage for § 1910.107 that had always been there. In addition, NFPA recommended it be further clarified that these liquids with the higher flashpoints belong to § 1910.107 and are not part of GHS Category 4 (Document ID #0497 Tr. 68).

In addition, Intercontinental Chemical Corporation recommended that OSHA create six new categories matching the six classes in the original § 1910.106 (Document ID #0500). The Agency believes that this approach would be inconsistent with GHS, since the GHS classifications and categories, including flammable liquid Categories 1–4, were established by international committees and are in place. OSHA's intent in this rulemaking is to harmonize the HCS with the existing GHS classifications and categories, not to make new categories.

In summary, OSHA views this rulemaking as a step towards eliminating current inconsistencies. OSHA believes the potential confusion with other agency policies, standards, consensus standards, and traditional practices suggested by the commenters are not likely to occur for several reasons. First, the changes in the final rule will bring internal consistency to the OSHA standards covered. OSHA standards currently have several cut-off values for flammable and combustible liquids. In OSHA's general industry standard (§ 1910.106), 100 °F is the cut-off between the flammable and combustible liquids, but in construction, § 1926.155, 140 °F is the cut-off between flammable and combustible. Harmonizing these standards, which have been out of sync for many years, will bring needed consistency to the safety standards. In addition, as noted above, substantive requirements have not changed, and therefore designs are not affected.

Second, the changes to the standards do not require changes in work practices. Rather, what have changed are a few regulatory terms used in the standards. Commenters who thought that such changes in definitions and terminology would result in significant and costly modifications to facility design and operation are incorrect, as the old requirements in the standards remain and no facility design and operation changes are required (Document ID #0344, 0381, and 0399). The requirements for what were known formerly as combustible liquids remain the same even though they are now categorized as flammable liquids.

Third, there is growing awareness of the GHS ''flammable liquids'' definition. Other agencies, such as DOT, are already aligned with the GHS definition for flammable liquids (49 CFR 173.120), and OSHA believes that its ANPR and NPRM have raised awareness of the definition.

Change occurs in every area of employment, and employers and workers get trained and adjust to the change; OSHA believes these minor changes will be accepted and adopted. OSHA's flammable and combustible liquid storage requirements have always been based on the flashpoint and boiling point of the liquid; OSHA does not

believe that facility designs rely on whether the liquid is labeled as flammable or combustible. (*See* Document ID #0497 Tr. 84–85) Thus, OSHA has concluded that the allegations of impacts on facility design and operations are perceptual rather than actual. This is especially true in light of the fact that certain OSHA standards were exempted from the terminology changes if these changes were to affect internal design criteria of any area of the workplace. OSHA has therefore concluded that the proposed changes to the § 1910.106 definitions are reasonably necessary and appropriate and has carried them forward into the final rule.

OSHA will be doing outreach to affected parties and working with professional and trade associations to help users become familiar with and competent in applying these modifications. ORC testified that the changes may cause confusion to workers familiar with NFPA nomenclature, and agreed with OSHA that, with training, any confusion resulting from the change from NFPA definitions and terminology to GHS definitions and terminology would be overcome. ORC (Document ID #0494 Tr. 100–101) further stated that potential confusion would not be a reason to delay moving forward with finalizing the standard:

> There's a significant problem with lack of harmonization of chemical control approaches in the United States, and we would like to see, as we said in our testimony, some sort of formalization because we think it's the only thing that's going to work here, formalization of regular contacts between the NFPA and OSHA.

Mike Wright, representing the United Steelworkers (Document ID #0494 Tr. 76–77), put it succinctly, stating:

> The whole point of harmonization is to reconcile different standards, which may be conflicting. That means something has to change. * * * Ultimately, in the short term will there be some confusion? Yes. Can we minimize that through good training, through good information? Yes, and we ought to, but ultimately I think we have a globally harmonized system that's been adopted on a worldwide level and then we have various national organizations—very important ones like the NFPA—which may deviate in the way they communicate hazards from that globally harmonized system.
>
> With respect to my friends at the NFPA, who I think do wonderful work, I think their job is to harmonize their system to the Globally Harmonized System. We hope that happens as soon as possible, and I'm confident that it will.
>
> You know, ultimately we need to go to one * * * system worldwide. We have that system now. It will take some time and a little bit of confusion to conform every other kind of national voluntary system to that, but that work has to be done.

OSHA agrees and believes users of the new GHS flammable liquid categories will implement its new terminology in their work.

Minor Safety Standard Changes

The note in the PSM construction standard, § 1926.64(d)(1)(vii), has been changed. In the current standard, paragraph (d)(1)(vii), the note states, ''Material Safety Data Sheets meeting the requirements of 29 CFR 1926.59(g) may be used to comply with this requirement to the extent they contain the information required by this subparagraph.'' The note has been changed to ''Safety Data Sheets (SDSs) meeting the requirements of 29 CFR 1910.1200(g) . * * *''

To correct a technical error and to complete alignment across standards, § 1910.106(j), Scope, has been made consistent with § 1910.106(a)(19) and § 1910.1200, Appendix B. Proposed § 1910.106(j) stated that it ''applie[d] to the handling, storage, and use of flammable liquids with a flashpoint *below* 199.4 °F (93 °C) unless otherwise noted.'' (Emphasis added). Final § 1910.106(j) is now consistent with § 1910.106(a)(19) and § 1910.1200 in that it applies to ''* * * flammable liquids with a flashpoint *at or below* 199.4 °F (93 °C) * * *'' (Emphasis added).

In § 1926.155, OSHA proposed to harmonize the definitions of flammable and combustible liquids to be consistent with the GHS categories of flammable liquids (*i.e.,* the updating of the definition of flammable liquids and the removal of the definition for combustible liquids), and this change is carried through to the final rule. The final rule also removes ''or combustible'' in the other standards in Subpart F, to maintain consistency with the ''Definitions'' in § 1926.155. In § 1926.150(c)(vi), which currently states, ''A fire extinguisher, rated not less than 10B, shall be provided within 50 feet of wherever more than 5 gallons of flammable or combustible liquids or 5 pounds of flammable gas are being used on the jobsite,'' the term ''or combustible'' has been removed. Likewise, the Agency is correcting § 1926.151(b)(3) by removing ''or combustible.'' In § 1926.151(a)(4), Portable battery powered lighting, which states that ''the storage, handling, or use of flammable gases or liquids, shall be * * * approved for the hazardous locations,'' the term ''flammable liquids'' has been changed to ''Category 1, 2, or 3 flammable liquids.'' This change maintains the scope set by the flashpoint ranges for the Subpart (as defined by the original § 1926.155 paragraphs (c) and (h)).

The Soap and Detergent Association and Consumer Specialty Products Association, in a joint comment (Document ID #0344), suggested that OSHA change the term ''pilot light'' to ''indicating light.'' As discussed previously, this type of change is outside of the scope of this rulemaking since it does not pertain to hazard communication or GHS harmonization. Therefore, OSHA is not adopting that suggestion at this time.

Methods To Determine Flashpoints

OSHA proposed to update the methods that may be used to determine flashpoints in the NPRM. These methods include updated ASTM methods, ISO methods, and British, French, and German national standards for the testing. The methods are listed in Appendix B.6 of § 1910.1200 and are also referenced in Revision 3 of the GHS (2009), Chapter 2.6.

In the definitions of § 1910.106, the current standard allowed only ASTM D–56–70 and ASTM D–93–71 as testing methods to determine flashpoints. In § 1926.155, which applies to Subpart F of the construction standards (Fire Protection and Prevention), OSHA currently allows only ASTM D–56–69 and ASTM D–93–69 for such determinations. The current HCS allows only ASTM D 56–79, ASTM D 93–79, and ASTM D 3278–78. The methods allowed in § 1910.155 were adopted in the late 1960s, and the methods for § 1910.106 and § 1926.1200 were adopted in the 1970s.

The NPRM updated the methods in § 1910.1200 to conform to the GHS. However, flashpoint methods in § 1910.1200 had always differed from methods in § 1910.106 and § 1926.155. Instead of revamping the older test methods in OSHA's other standards, the proposal allowed a broader test selection. OSHA kept the tests currently permitted in § 1910.106 and § 1926.155 because they were in the original OSHA standards, but allowed methods in the GHS-modified HCS be used as well. The final rule adopts these changes.

Thus, the final rule amends § 1910.106 and § 1926.155 to allow ASTM D–56–70 and ASTM D–93–71 for § 1910.106; ASTM D–56–69 and ASTM D–93–69 for § 1910.155; and the equivalent testing methods permitted in the HCS, § 1910.1200, Appendix B.6, Physical Hazard Criteria. For example, as amended by the final rule, § 1910.106(a)(14)(i) states that for a liquid which has a viscosity of less than 45 SUS at 100 °F (37.8 °C), does not

contain suspended solids, and does not have a tendency to form a surface film while under test, the procedure specified in the Standard Method of Test for Flashpoint by Tag Closed Tester (ASTM D–56–70), which is incorporated by reference as specified in § 1910.6, or an equivalent test method as defined in Appendix B to § 1910.1200—Physical Hazard Criteria, must be used.

By equivalent test method, OSHA means employers can select any of the test methods in Appendix B.6 or in Chapter 2.6 of Revision 3 of the GHS (2009).

The only comments on this issue recommended additional methods for determining flashpoints (Document ID #0344 and 0381). The Soap and Detergent Association/Consumer Specialty Products Association (Document ID #0344) and the Procter & Gamble Company (Document ID #0381) recommended OSHA include ASTM D6450 on the list of approved methods for determining the flashpoints of liquids in the ''incorporation by reference'' list in § 1910.106. OSHA is not prepared to adopt this method at this time. The determination of flashpoint test methods for GHS falls under a Sub-committee of the United Nations Economic and Social Council's Committee of Experts on the Transport of Dangerous Goods (UNCEDTG). Commenters who wish the GHS to incorporate ASTM D6450 should direct their requests to that body, and if the method is incorporated into the GHS, OSHA will consider the matter at that time.

Flammable Aerosols

OSHA currently defines the term ''flammable aerosol'' in § 1910.106 and in § 1910.1200 by reference to a definition developed by the Consumer Product Safety Commission under the Federal Hazardous Substances Act. *See* 16 CFR 1500.45; *See also* 15 U.S.C. 1261(l). The current HCS defines flammable aerosol as an aerosol that, when tested by the method described in 16 CFR 1500.45, yields a flame projection exceeding 18 inches at full valve opening, or a flashback (a flame extending back to the valve) at any degree of valve opening.

The current § 1910.106 definitions for ''aerosol'' and ''flammable aerosol'' are provided in (§ 1910.106(a)(1)) and (§ 1910.106(a)(13)) and are different from those in the revised Hazard Communication Standard. In the current § 1910.106, an aerosol is defined as a material which is dispensed from its container as a mist, spray, or foam by a propellant under pressure. However, in the current § 1910.106, a flammable aerosol is defined as an aerosol which is required to be labeled ''Flammable'' under the Federal Hazardous Substances Labeling Act (15 U.S.C. 1261). For the purposes of § 1910.106(d), such aerosols are considered Class IA liquids.

OSHA proposed to remove the definitions of ''aerosol'' and ''flammable aerosol'' from § 1910.106 and instead insert its GHS-consistent definitions along with references to Appendix B.3 of the GHS-modified HCS. In response to OSHA's proposed action, National Paint and Coatings Association and Alliance of Hazardous Materials Professionals both said that, while they were not prepared to offer specific impact information on operations, ''to align OSHA definitions for * * * Flammable Aerosols is fully consistent with the concept of a 'single world-wide' definition for these hazards.'' (Document ID #0313 and 0327).

OSHA agrees with these comments and has included the revised definition of ''flammable aerosols'' in the final rule. The revised definition in the Flammable liquids standard, § 1910.106, duplicates the flammable aerosols definition contained in Appendix B to § 1910.1200—Physical Hazard Criteria. For the purposes of § 1910.106(d), such aerosols are considered Category 1 flammable liquids.

The GHS-modified definition and classification criteria for flammable aerosols can be found in Appendix B.3 of HCS.

OSHA's decision to change the definition of aerosols to be consistent with the GHS-modified HCS is based not only upon harmonizing its own standards with those followed by other countries who have or are considering adopting GHS, but also to harmonize with DOT's definition for flammable aerosols, which is also consistent with the GHS. *See* 49 CFR 173.115(k).

Dr. Michelle Sullivan (Document ID #0382), alluding to flammable aerosols, pointed out that flammable categories will differ among regulatory authorities. She stated:

> [T]he GHS flammable aerosol criteria are linked to the criteria for flammable liquid, flammable solid and flammable gas, the flammable aerosol criteria depend on the hazard categories/building blocks of these other hazards * * * some regulatory authorities will adopt categories 1–4 while others will adopt categories 1–3 * * * [and thus] * * * the flammable aerosol criteria will differ for these regulatory authorities.

Regarding Dr. Sullivan's comment, OSHA acknowledges that other regulatory bodies, when adopting GHS, may choose different building blocks. However, the basis for classification will still be based on the same criteria and will lead to harmonization of similarly covered materials. This does not affect OSHA's decision to strive for both domestic and international harmonization.

Finally, OSHA believes that the GHS classification criteria are similar enough to the current § 1910.106 and § 1910.1200 criteria that all aerosols currently regulated by OSHA would continue to be so, and that few, if any, new aerosols would be subject to OSHA regulation. Indeed, OSHA raised this issue in the NPRM and received no comments to the contrary.

Standards Not Included in This Rulemaking

OSHA did not propose to change standards that incorporate by reference other consensus standards, such as NFPA codes, or are based on consensus standards when those consensus standards are used for internal design criteria only and do not reference the HCS for applicable scope or incorporation into the SDS. These standards include Subpart S—Electrical, in Part 1910 (General Industry), and Subpart K—Electrical, in Part 1926 (Construction). Many commenters on the ANPR were particularly concerned that a change in OSHA's definitions would create an incompatibility with local building codes (Document ID #0047, 0075, 0076, 0104, 0113, 0145 and 0163). They alleged that, in many cases, this would require extensive rewiring to meet the Subpart S requirements on hazardous locations and would lead to conflicts with local electrical codes.

Many commenters on the NPRM supported OSHA's exemption of these standards (Document ID #0328, 0330, 0336, 0370, 0393, and 0408). Ameren expressed concern that if OSHA harmonized the electrical and blasting agents standards (Part 1910 Subpart S, § 1910.109, and Part 1926 Subpart K, § 1926.914) with the GHS, such changes would require training of affected employees on the changes (Document ID #0330). ASSE agreed with OSHA's decision not to propose updates to the electrical standards (general industry 1910 Subpart S and construction 1926 Subpart K) or explosives and blasting agents (general industry § 1910.109 and construction § 1926.914), since these subparts are ''self-contained'' in that they do not rely on other OSHA standards for regulatory scope or definitions but reference external organizations such as the National Fire Protection Association (NFPA) (Document ID #0336). The American Iron and Steel Institute agreed (Document ID #0408). ORC strongly

supported OSHA's approach of not updating these standards but waiting until the referenced external organizations adopted the GHS elements (Document ID #0370).

Wacker Chemical Company, PRR, and ACC urged OSHA to update electrical and explosive and blasting agents standards if the consensus organizations could come to agreement, and they expressed their concerns regarding potential conflicts with local codes and regulations (Document ID #0335, 0339, and 0393). Wacker Chemical Corporation encouraged OSHA to work closely with organizations (NFPA and others) that develop fire and electrical codes to ensure there is consistent application of these codes to area classification, building construction, equipment electrical ratings, etc. (Document ID #0335). Wacker Chemical suggested that OSHA could make progress with the consensus organizations (Document ID #0335). PRR recommended harmonization updates of electrical and explosive standards if the updates would enhance safety and the ease of doing business in the global market (Document ID #0339). The ACC agreed with OSHA's decision not to change standards that incorporate consensus standards by reference (*i.e.,* design criteria) (Document ID #0393). ACC requested OSHA clarify in its final rule that harmonization would not affect the International Building Code and the International Fire Code such that users will not be unduly required to upgrade buildings to conform to requirements for hazardous occupancies. By its decision regarding standards not included in this rulemaking, OSHA is making it clear that upgrading buildings is not within the scope of this rulemaking.

OSHA agrees with those comments that expressed the desire to harmonize but also expressed concern over the potential effects of internal codes. OSHA concluded that exempting those standards where conflicts with internal codes could occur at this time was appropriate. OSHA agrees with ACC that impacting electrical area classification, facility siting, and wiring configuration is not appropriate. Therefore, because of these potential conflicts with internal design criteria, OSHA is not harmonizing the electrical and other standards that depend on internal design criteria and local building codes.

Explosives and Blasting Agents

OSHA did not propose to harmonize the Explosive and Blasting Agents standards, § 1910.109 (general industry) and § 1926, Subpart U (construction). At the time of the proposal, a separate rulemaking to revise them was in progress. That rulemaking has since been terminated (75 FR 5545, Feb. 3, 2010). However, the HCS has always covered hazardous chemicals regulated by OSHA's Explosive and Blasting Agents standards. Although the rulemaking on explosives and blasting agents has ceased, the general requirements in the GHS-modified HCS and specific requirements in its appendices still apply to explosives and blasting agents that can be considered hazardous chemicals. Manufacturers and importers must evaluate chemicals to classify their health and physical hazards in accordance with paragraph (d) of the HCS, must affix labels in accordance with paragraph (f) in HCS, and must provide SDSs in accordance with paragraph (g) of the HCS. Appendix B.1 of the GHS-modified HCS contains specific classification criteria for explosives. Furthermore, labels are required by the Department of Transportation (DOT) for the transportation of packages or containment devices that contain hazardous materials meeting one or more of DOT's hazard class definitions. *See* 49 CFR Part 172 Subpart E. In addition, OSHA's general industry standard § 1910.1201, ''Retention of DOT markings, placards, and labels,'' requires that DOT labels, placards, or markings be retained under certain conditions. Thus, explosives and blasting agents are already covered by the GHS-modified HCS and § 1910.1201.

The few commenters who addressed the issue supported OSHA's decision not to include the Explosive and Blasting Agents standards (§ 1910.109 and § 1926.914) in the proposal (Document ID #0328, 0330, 0336, 0362, and 0370).

As to the continuing coverage of HCS, a representative from Institute Makers of Explosives stated that the commercial explosives industry understands the importance of GHS, has been prepared for several years to implement GHS, and would not experience any impacts to explosives operations that were not already anticipated (Document ID #0362).

Galaxy Fireworks noted that § 1910.109(k)(1) excludes the sale and ''use (public display)'' of pyrotechnics (fireworks) from the explosives standard (Document ID #0355). Galaxy Fireworks' concern was the potential for the proposal to create a regulation that overlaps with the existing requirements of the Department of Transportation and the Consumer Product Safety Commission. Galaxy urged OSHA to work with these other agencies in amending the HCS to develop regulations that would apply uniformly to the fireworks industry and with other organizations to further harmonization (Document ID #0335). OSHA agrees and believes its global harmonization efforts embodied in this rulemaking go a long way toward the overall goal of consistency.

Maritime

OSHA received one comment, from Northrop Grumman Shipbuilding, which stated that OSHA had omitted modification of the shipyard Part 1915 safety standards for GHS harmonization (Document ID # 0395). More specifically, Northrop Grumman believed that the maritime standards that contain requirements for flammable and combustible liquids required review and updating to be GHS harmonized, just as the flammable and combustible liquids the General Industry Part 1910 and Construction Part 1926 standards were proposed to be reviewed and updated.

OSHA did not propose to update the maritime standards, other than the substance-specific standards mentioned above, in this rulemaking. Unlike the standards in general industry and construction, the maritime standards (Shipyard Employment, Part 1915; Marine Terminals, Part 1917; and Longshoring, Part 1918) have always addressed flammables and combustibles in their own unique way, reflecting the special conditions of maritime work. These parts do not use flashpoint criteria to distinguish between flammable and combustible liquids. The terminology in the maritime standards that addresses flammable and combustible materials, including liquids, differs from the general industry and construction standards. For example, § 1915.12(b)(1) (Flammable atmospheres) and § 1915.54 (Welding, cutting and heating of hollow metal containers not covered by § 1915.12) require competent-person testing and contain detailed instructions on the specific maritime work covered.

There are a few paragraphs in the maritime standards where flammable and combustible liquids requirements reference flashpoint criteria but in these cases, flashpoints are not used for the purpose of distinguishing flammable from combustible liquids. Examples include Subpart P, Fire Protection, § 1915.501 through § 1915.509, where flammable liquid is defined as liquids with flashpoints below 100 °F (37.8 °C). Combustible liquids are neither defined nor mentioned in this Subpart, although combustible materials are mentioned and not defined. Other maritime standards such as § 1915.14 (Hot work)

and § 1915.35 (Painting) specify flashpoints for certain requirements, but these are not distinctions of flashpoints defining flammable or combustible liquids. The final rule does not modify these criteria.

OSHA has issued a maritime compliance tool, ''Tool Bag Directive for the Part 1915 Shipyard Employment Standards,'' that includes specific interpretations of the maritime standards. The Tool Bag Directive references specific general industry standards in order to provide further guidance related to some of the more general maritime requirements. A specific case is how general industry standard § 1910.106 is used. The Tool Bag Directive informs users that if specific Part 1915 shipyard requirements give flashpoint criteria, those requirements take precedence. However, where definitions of flammable and combustible liquids are not specified in the Part 1915 shipyard standards, the definitions of § 1910.106 are to apply. The final rule's changes do not significantly modify the substantive requirements of § 1910.106, and the Tool Bag Directive's interpretive policy will continue after the final rule becomes effective, using the new definitions in § 1910.106.

In a similar manner, OSHA has a compliance tool for Parts 1917 ''Marine Terminals'' and 1918 ''Longshoring'' called the Tool Shed Directive. This Directive notes that the requirements of § 1910.1200 apply to operations covered by Parts 1917 and 1918. *See also* 1917.1(a)(2)(vi); 1918.1(b)(4). Therefore, all the requirements in the GHS-modified HCS (§ 1910.1200), and its appendices will apply to the maritime industry. In addition, part 1910 applies to marine terminal operations that fall within the exception found at § 1917.1(a)(1)(i): ''facilities used solely for the bulk storage, handling, and transfer of flammable, non-flammable, and combustible liquids and gases.'' The final rule's changes to § 1910.106 will therefore apply to facilities handling flammable and combustible liquids that fall within this exclusion, but again, as explained above, the substantive requirements of § 1910.106 have not changed significantly.

Construction

The Building and Construction Trades Department (BCTD) requested that OSHA clarify inconsistencies in the construction standards, particularly by updating the Part 1926 standards to conform to the proposed requirements for and definitions of ''flammable'' and the related deletion of the term ''combustible'' liquids (Document ID # 0359). BCTD gave examples of §§ 1926.152, 1926.155, 1926.66 and Subpart K of Part 1926 and requested that OSHA conduct a thorough review of the Part 1926 construction standards. Though it had done so once in preparing the NPRM, OSHA again conducted a thorough review of Part 1926. OSHA had already proposed to modify § 1926.152 (Flammable and combustible liquids) and § 1926.155 (Definitions) as well as § 1926.64 (Process Safety Management), § 1926.65 (HAZWOPER), and the substance-specific health standards in construction in the NPRM. As explained above, OSHA has made further revisions in the construction regulations regarding process safety management (§ 1926.64(d)(1)(vii)) and fire protection and prevention (§ 1926.150(c)(vi), § 1926.151(a)(4)), and § 1926.151(b)(3)) in this final rule.

Like Subpart S in general industry, § 1926.66 (Criteria for design and construction of spray booths) belongs to the category of construction standards that incorporate other consensus standards by reference, such as NFPA codes, or are based on consensus standards when those consensus standards are used for internal design criteria only and do not reference HCS for applicable scope or incorporation into the SDS. Clearly, there is no reason to change the terminology in § 1926.66. As noted above, Part 1926, Subpart K (Electrical), belongs in this category. Other similar standards are § 1926.351 (Arc Welding and Cutting), and Part 1926, Subpart V (Power Transmission and Distribution). OSHA is not modifying these standards for the same reasons listed above for general industry.

Similar to the discussion regarding the Maritime standards, OSHA did not propose modifications of standards that do not contain definitions that are applicable to standards in the Subpart or explicitly reference standards that contain the definitions. The standards may contain phrases with the terms ''flammable liquid'' or ''combustible liquid,'' but the definitions of the terms are absent. Standards belonging to this category of undefined terms include § 1926.66(c)(9)(i) (Criteria for design and construction of spray booths), § 1926.252(e) (Disposal of waste materials), § 1926.307(p)(2)(ii) (Mechanical power-transmission apparatus), § 1926.352(c) and (h) (Fire prevention), § 1926.803(l)(13) (Compressed air), and § 1926.1101, Appendix B (Sampling and Analysis for Asbestos). In addition, some of these standards' requirements use the term ''flammable liquid'' without the term ''combustible liquid,'' and some of the requirements use the term ''combustible liquid'' without the term ''flammable liquid.'' As with the maritime standards, since OSHA has not changed the actual requirements of § 1910.106 or § 1926.155, OSHA does not anticipate that the final rule will affect the requirements of other OSHA standards that use some of the same terminology.

In addition, OSHA did not modify standards that refer to flammable and combustible materials, storage piles, etc. that are not liquids. Examples are § 1926.550(a)(15)(vii)(C) (Cranes and derricks), which refers to combustible and flammable materials; § 1926.956(b)(3) (Underground lines), which refers to combustible gases; and § 1926.352(c) (Fire prevention), which refers to flammable compounds. In addition, § 1926.154(e)(1) (Temporary heating devices) mentions ''flammable liquids,'' but the term was not the focus of the standard. The requirement mentions flammable liquid-fired heaters, but the focus is on safety controls for the particular piece of equipment. Safety training and education, § 1926.21(b)(5), is another example that contains some of the terminology, but its focus is on safety training. Flammable liquids are treated in a general sense, *i.e.,* grouped with gases or toxic materials.

Miscellaneous

A commenter from the International Chemical Workers Union Council recommended OSHA include a conversion formula for Centigrade and Fahrenheit or, at a minimum, provide the equivalent degrees when addressing flammable and combustible liquids, since in general employers and employees in the U.S. are more familiar with degrees Fahrenheit (Document ID # 456). OSHA proposed to provide temperature equivalents, and in the final standard equivalents are included where there are requirements for flammable and combustible liquids. The formulas for conversion are:

(9/5) °C + 32 = °F or (5/9)(°F–32) = °C

Since the formulas for conversion are standard formulas found in textbooks, and since equivalents have been provided wherever possible for flammable and combustible liquids, OSHA has determined that it is not necessary to state the formulas for conversion in the actual regulations.

XIV. Authority and Signature

This document was prepared under the direction of David Michaels, Assistant Secretary of Labor for Occupational Safety and Health, U.S.

Department of Labor, 200 Constitution Avenue NW., Washington, DC 20210. It is issued under the authority of sections 4, 6, and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); 5 U.S.C. 553; Section 304, Clean Air Act Amendments of 1990 (Pub. L. 101–549, reprinted at 29 U.S.C.A. 655 Note); Section 41, Longshore and Harbor Workers' Compensation Act (33 U.S.C. 941); Section 107, Contract Work Hours and Safety Standards Act (40 U.S.C. 3704); Section 1031, Housing and Community Development Act of 1992 (42 U.S.C. 4853); Section 126, Superfund Amendments and Reauthorization Act of 1986, as amended (reprinted at 29 U.S.C.A. 655 Note); Secretary of Labor's Order No. 1–2012 (77 FR 3912); and 29 CFR Part 1911.

List of Subjects

29 CFR Part 1910

Asbestos, Blood, Chemicals, Diving, Fire prevention, Gases, Hazard communication, Hazardous substances, Health records, Incorporation by reference, Labeling, Labels, Laboratories, Occupational safety and health, Reporting and recordkeeping requirements, Safety data sheets, Signs and symbols, and Training.

29 CFR Part 1915

Hazard communication, Hazardous substances, Labels, Longshore and harbor workers, Occupational safety and health, Reporting and recordkeeping requirements, Safety data sheets, Signs and symbols, Training, and Vessels.

29 CFR Part 1926

Chemicals, Construction industry, Diving, Fire prevention, Gases, Hazard communication, Hazardous substances, Health records, Labels, Lead, Occupational safety and health, Reporting and recordkeeping requirements, Safety data sheets, Signs and symbols, and Training.

Signed at Washington, DC, on February 23, 2012.

David Michaels,

Assistant Secretary of Labor for Occupational Safety and Health.

Final Amendments

For the reasons discussed in the preamble, the Occupational Safety and Health Administration amends 29 CFR parts 1910, 1915 and 1926 as set forth below:

PART 1910—OCCUPATIONAL SAFETY AND HEALTH STANDARDS

Subpart A—[Amended]

■ 1. Revise the authority citation for subpart A of part 1910 to read as follows:

Authority: Sections 4, 6, and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); Secretary of Labor's Order No. 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736), 1–90 (55 FR 9033), 6–96 (62 FR 111), 3–2000 (65 FR 50017), 5–2002 (67 FR 65008), 5–2007 (72 FR 31159), 4–2010 (75 FR 55355) or 1–2012 (77 FR 3912), as applicable.

Section 1910.6 also issued under 5 U.S.C. 553. Sections 1910.6, 1910.7, and 1910.8 also issued under 29 CFR Part 1911. Section 1910.7(f) also issued under 31 U.S.C. 9701, 29 U.S.C. 9a, 5 U.S.C. 553; Pub. L. 106–113 (113 Stat. 1501A–222); Pub. L. 111–8 and 111–317 and OMB Circular A–25 (dated July 8, 1993) (58 FR 38142, July 15, 1993).

■ 2. Amend § 1910.6 by revising paragraphs (a)(4) and (h), the introductory text of paragraph (q), and by adding new paragraphs (q)(37), (y), and (z) to read as follows:

§ 1910.6 Incorporation by reference

(a) * * *

(4) Copies of standards listed in this section and issued by private standards organizations are available for purchase from the issuing organizations at the addresses or through the other contact information listed below for these private standards organizations. In addition, these standards are available for inspection at any Regional Office of the Occupational Safety and Health Administration (OSHA), or at the OSHA Docket Office, U.S. Department of Labor, 200 Constitution Avenue NW., Room N–2625, Washington, DC 20210; telephone: 202–693–2350 (TTY number: 877–889–5627). They are also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of these standards at NARA, telephone: 202–741–6030, or go to *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.*

* * * * *

(h) Copies of the standards listed below in this paragraph (h) are available for purchase from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428–2959; Telephone: 610–832–9585; Fax: 610–832–9555; Email: *seviceastm.org;* Web site: *http://www.astm.org.* Copies of historical standards or standards that ASTM does not have may be purchased from Information Handling Services, Global Engineering Documents, 15 Inverness Way East, Englewood, CO 80112; Telephone: 1–800–854–7179; Email: *global@ihs.com;* Web sites: *http://global.ihs.com* or *http://www.store.ihs.com.*

(1) ASTM A 47–68, Malleable Iron Castings, IBR approved for § 1910.111.

(2) ASTM A 53–69, Welded and Seamless Steel Pipe, IBR approved for §§ 1910.110 and 1910.111.

(3) ASTM A 126–66, Gray Iron Casting for Valves, Flanges and Pipe Fitting, IBR approved for § 1910.111.

(4) ASTM A 391–65 (ANSI G61.1–1968), Alloy Steel Chain, IBR approved for § 1910.184.

(5) ASTM A 395–68, Ductile Iron for Use at Elevated Temperatures, IBR approved for § 1910.111.

(6) ASTM B 88–66A, Seamless Copper Water Tube, IBR approved for § 1910.252.

(7) ASTM B 88–69, Seamless Copper Water Tube, IBR approved for § 1910.110.

(8) ASTM B 117–64, Salt Spray (Fog) Test, IBR approved for § 1910.268.

(9) ASTM B 210–68, Aluminum-Alloy Drawn Seamless Tubes, IBR approved for § 1910.110.

(10) ASTM B 241–69, Standard Specifications for Aluminum-Alloy Seamless Pipe and Seamless Extruded Tube, IBR approved for § 1910.110.

(11) ASTM D 5–65, Test for Penetration by Bituminous Materials, IBR approved for § 1910.106.

(12) ASTM D 56–70, Test for Flash Point by Tag Closed Tester, IBR approved for § 1910.106.

(13) ASTM D 56–05, Standard Test Method for Flash Point by Tag Closed Cup Tester, Approved May 1, 2005, IBR approved for Appendix B to § 1910.1200.

(14) ASTM D 86–62, Test for Distillation of Petroleum Products, IBR approved for §§ 1910.106 and 1910.119.

(15) ASTM D 86–07a, Standard Test Method for Distillation of Petroleum Products at Atmospheric Pressure, Approved April 1, 2007, IBR approved for Appendix B to § 1910.1200.

(16) ASTM D 88–56, Test for Saybolt Viscosity, IBR approved for § 1910.106.

(17) ASTM D 93–71, Test for Flash Point by Pensky Martens, IBR approved for § 1910.106.

(18) ASTM D 93–08, Standard Test Methods for Flash Point by Pensky-Martens Closed Cup Tester, Approved Oct. 15, 2008, IBR approved for Appendix B to § 1910.1200.

(19) ASTM D 240–02 (Reapproved 2007), Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter, Approved May 1, 2007, IBR approved for Appendix B to § 1910.1200.

(20) ASTM D 323–68, Standard Test Method of Test for Vapor Pressure of Petroleum Products (Reid Method), IBR approved for § 1910.106.

(21) ASTM D 445–65, Test for Viscosity of Transparent and Opaque Liquids, IBR approved for § 1910.106.

(22) ASTM D 1078–05, Standard Test Method for Distillation Range of Volatile Organic Liquids, Approved May 15, 2005, IBR approved for Appendix B to § 1910.1200.

(23) ASTM D 1692–68, Test for Flammability of Plastic Sheeting and Cellular Plastics, IBR approved for § 1910.103.

(24) ASTM D 2161–66, Conversion Tables for SUS, IBR approved for § 1910.106.

(25) ASTM D 3278–96 (Reapproved 2004) E1, Standard Test Methods for Flash Point of Liquids by Small Scale Closed-Cup Apparatus, Approved November 1, 2004, IBR approved for Appendix B to § 1910.1200.

(26) ASTM D 3828–07a, Standard Test Methods for Flash Point by Small Scale Closed Cup Tester, Approved July 15, 2007, IBR approved for Appendix B to § 1910.1200.

(27) ASTM F–2412–2005, Standard Test Methods for Foot Protection, IBR approved for § 1910.136.

(28) ASTM F–2413–2005, Standard Specification for Performance Requirements for Protective Footwear, IBR approved for § 1910.136.

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(q) The following material is available for purchase from the National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, MA 02269; Telephone: 800–344–3555 or 617–770–3000; Fax: 1–800–593–6372 or 1–508–895–8301; Email: *custserv@nfpa.org;* Web site: *http://www.nfpa.org.*

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(37) NFPA 30B, Code for the Manufacture and Storage of Aerosol Products, 2007 Edition, Approved August 17, 2006, IBR approved for Appendix B to § 1910.1200.

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(y)(1) The following materials are available for purchase from the International Standards Organization (ISO) through ANSI, 25 West 43rd Street, Fourth Floor, New York, NY 10036–7417; Telephone: 212–642–4980; Fax: 212–302–1286; Email: *info@ansi.org;* Web site: *http://www.ansi.org.*

(2) Documents not available in the ANSI store may be purchased from:

(i) Document Center Inc., 111 Industrial Road, Suite 9, Belmont, 94002; Telephone: 650–591–7600; Fax: 650–591–7617; Email: *info@document-center.com; Web site: www.document-center.com.*

(ii) DECO—Document Engineering Co., Inc., 15210 Stagg Street, Van Nuys, CA 91405; Telephone: 800–645–7732 or 818–782–1010; Fax: 818–782–2374; Email: *doceng@doceng.com;* Web site: *www.doceng.com*

(iii) Global Engineering Documents, 15 Inverness Way East, Englewood, CO 80112; Telephone: 1–800–854–7179 or 303–397–7956; Fax: 303–397–2740; Email: *global@ihs.com;* Web sites: *http://global.ihs.com* or *http://www.store.ihs.com;*

(iv) ILI Infodisk, Inc., 610 Winters Avenue, Paramus, NJ 07652; Telephone: 201–986–1131; Fax: 201–986–7886; Email: *sales@ili-info.com;* Web site: *www.ili-info.com.*

(v) Techstreet, a business of Thomson Reuters, 3916 Ranchero Drive, Ann Arbor, MI 48108; Telephone: 800–699–9277 or 734–780–8000; Fax: 734–780–2046; Email: *techstreet.service@thomsonreuters.com;* Web site: *www.Techstreet.com.*

(3) ISO 10156:1996 (E), Gases and Gas Mixtures—Determination of Fire Potential and Oxidizing Ability for the Selection of Cylinder Valve Outlets, Second Edition, Feb. 15, 1996, IBR approved for Appendix B to § 1910.1200.

(4) ISO 10156–2:2005 (E), Gas cylinders—Gases and Gas Mixtures—Part 2: Determination of Oxidizing Ability of Toxic and Corrosive Gases and Gas Mixtures, First Edition, Aug. 1, 2005, IBR approved for Appendix B to § 1910.1200.

(5) ISO 13943:2000 (E/F), Fire Safety—Vocabulary, First Edition, April, 15, 2000, IBR approved for Appendix B to § 1910.1200.

(z)(1) The following document is available for purchase from United Nations Publications, Customer Service, c/o National Book Network, 15200 NBN Way, PO Box 190, Blue Ridge Summit, PA 17214; telephone: 1–888–254–4286; fax: 1–800–338–4550; email: *unpublications@nbnbooks.com.* Other distributors of United Nations Publications include:

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(2) UN ST/SG/AC.10/Rev.4, The UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Fourth Revised Edition, 2003, IBR approved for Appendix B to § 1910.1200.

Subpart H—[Amended]

■ 3. The authority citation for subpart H is revised to read as follows:

Authority: Sections 4, 6, and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); Secretary of Labor's Order No. 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736), 1–90 (55 FR 9033), 6–96 (62 FR 111), 3–2000 (65 FR 50017), or 5–2007 (72 FR 31159), 4–2010 (75 FR 55355) or 1–2012 (77 FR 3912), as applicable; and 29 CFR part 1911.

Sections 1910.103, 1910.106 through 1910.111, and 1910.119, 1910.120, and 1910.122 through 1910.126 also issued under 29 CFR part 1911.

Section 1910.119 also issued under Section 304, Clean Air Act Amendments of 1990 (Pub. L. 101–549), reprinted at 29 U.S.C.A. 655 Note.

Section 1910.120 also issued under Section 126, Superfund Amendments and Reauthorization Act of 1986 as amended (29 U.S.C.A. 655 Note), and 5 U.S.C. 553.

■ 4. Amend § 1910.106 as follows:

■ A. Revise the section heading;

■ B. Revise paragraphs (a)(13), (a)(14)(i) through (a)(14)(iii), and (a)(19);

■ C. Remove the last sentence of paragraph (a)(17);

■ D. Remove and reserve paragraph (a)(18);

■ E. Remove the words ''or combustible'' wherever they appear in § 1910.106.

■ F. Remove the words ''and combustible'' in paragraphs (d)(5)(vi) introductory text, (e)(2) introductory text, (j)(1) and (j)(3);

■ G. Revise paragraphs (b)(2)(iv)(*f*) and (*g*), (b)(2)(vi)(*b*), (b)(2)(viii)(*e*), (b)(3)(i), (b)(3)(iv)(*a*), (b)(3)(iv)(*c*), (b)(3)(v)(*d*), and (b)(4)(iv)(*e*);

■ H. Revise paragraphs (d)(1)(ii)(*b*), (d)(2)(iii) introductory text and (d)(2)(iii)(*a*)(*2*), Table H–12, paragraphs (d)(3)(i), (d)(4)(iii), (d)(4)(iv), Tables H–14 through H–17, and paragraph (d)(7)(i)(*b*);

■ I. Revise paragraphs (e)(2)(ii)(*b*)(*1*), (e)(2)(ii)(*b*)(*2*), (e)(2)(ii)(*b*)(*3*), (e)(2)(iv)(*a*), (e)(2)(iv)(*c*), (e)(3)(v)(*a*), (e)(3)(v)(*b*), (e)(4)(i), (e)(6)(ii), and (e)(7)(i)(*c*);

■ J. Revise paragraphs (f)(1)(i), (f)(1)(ii), (f)(2)(ii), (f)(2)(iii)(*a*), (f)(2)(iii)(*b*), (f)(2)(iii)(*c*), (f)(3)(i), (f)(3)(ii), (f)(3)(iv)(*a*)(*1*), (f)(3)(iv)(*a*)(*2*), (f)(3)(iv)(*d*)(*2*), (f)(3)(v), (f)(3)(vi), (f)(4)(viii)(*e*), (f)(5)(i), (f)(6), and (f)(8);

■ K. Revise paragraphs (g)(1)(i)(*c*), (g)(1)(i)(*e*) introductory text, (g)(1)(i)(*f*), (g)(1)(iii)(*a*), (g)(1)(iii)(*b*), (g)(1)(iii)(*c*), (g)(1)(v), (g)(3)(iv)(*a*), (g)(3)(iv)(*b*),

(g)(3)(iv)(*c*), (g)(3)(v)(*a*), (g)(3)(vi)(*a*), Table H–19, and paragraphs (g)(4)(iii)(*d*), (g)(5)(i), (g)(6)(iv), and (g)(7); and

■ L. Revise paragraphs (h)(3)(i)(*a*), (h)(3)(iii)(*b*), (h)(3)(iv), (h)(5), (h)(7)(i)(*b*), (h)(7)(iii)(*c*), and (j).

The revisions read as follows:

§ 1910.106 Flammable liquids.

* * * * *

(a) * * *

(13) Flammable aerosol shall mean a flammable aerosol as defined by Appendix B to § 1910.1200—Physical Hazard Criteria. For the purposes of paragraph (d) of this section, such aerosols are considered Category 1 flammable liquids.

(14) * * *

(i) For a liquid which has a viscosity of less than 45 SUS at 100 °F (37.8 °C), does not contain suspended solids, and does not have a tendency to form a surface film while under test, the procedure specified in the Standard Method of Test for Flashpoint by Tag Closed Tester (ASTM D–56–70), which is incorporated by reference as specified in § 1910.6, or an equivalent test method as defined in Appendix B to § 1910.1200—Physical Hazard Criteria, shall be used.

(ii) For a liquid which has a viscosity of 45 SUS or more at 100 °F (37.8 °C), or contains suspended solids, or has a tendency to form a surface film while under test, the Standard Method of Test for Flashpoint by Pensky-Martens Closed Tester (ASTM D–93–71) or an equivalent method as defined by Appendix B to § 1910.1200—Physical Hazard Criteria, shall be used except that the methods specified in Note 1 to section 1.1 of ASTM D–93–71 may be used for the respective materials specified in the Note. The preceding ASTM standard is incorporated by reference as specified in § 1910.6.

(iii) For a liquid that is a mixture of compounds that have different volatilities and flashpoints, its flashpoint shall be determined by using the procedure specified in paragraph (a)(14)(i) or (ii) of this section on the liquid in the form it is shipped.

* * * * *

(18) [Reserved]

(19) *Flammable liquid* means any liquid having a flashpoint at or below 199.4 °F (93 °C). Flammable liquids are divided into four categories as follows:

(i) Category 1 shall include liquids having flashpoints below 73.4 °F (23 °C) and having a boiling point at or below 95 °F (35 °C).

(ii) Category 2 shall include liquids having flashpoints below 73.4 °F (23 °C) and having a boiling point above 95 °F (35 °C).

(iii) Category 3 shall include liquids having flashpoints at or above 73.4 °F (23 °C) and at or below 140 °F (60 °C). When a Category 3 liquid with a flashpoint at or above 100 °F (37.8 °C) is heated for use to within 30 °F (16.7 °C) of its flashpoint, it shall be handled in accordance with the requirements for a Category 3 liquid with a flashpoint below 100 °F (37.8 °C).

(iv) Category 4 shall include liquids having flashpoints above 140 °F (60 °C) and at or below 199.4 °F (93 °C). When a Category 4 flammable liquid is heated for use to within 30 °F (16.7 °C) of its flashpoint, it shall be handled in accordance with the requirements for a Category 3 liquid with a flashpoint at or above 100 °F (37.8 °C).

(v) When liquid with a flashpoint greater than 199.4 °F (93 °C) is heated for use to within 30 °F (16.7 °C) of its flashpoint, it shall be handled in accordance with the requirements for a Category 4 flammable liquid.

* * * * *

(b) * * *

(2) * * *

(iv) * * *

(*f*)*(1)* Tanks and pressure vessels storing Category 1 flammable liquids shall be equipped with venting devices which shall be normally closed except when venting to pressure or vacuum conditions. Tanks and pressure vessels storing Category 2 flammable liquids and Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C) shall be equipped with venting devices which shall be normally closed except when venting under pressure or vacuum conditions, or with approved flame arresters.

(2) Exemption: Tanks of 3,000 bbls (barrels). capacity or less containing crude petroleum in crude-producing areas and outside aboveground atmospheric tanks under 1,000 gallons capacity containing other than Category 1 flammable liquids may have open vents. (*See* paragraph (b)(2)(vi)(*b*) of this section.)

(*g*) Flame arresters or venting devices required in paragraph (b)(2)(iv)(*f*) of this section may be omitted for Category 2 flammable liquids and Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C) where conditions are such that their use may, in case of obstruction, result in tank damage.

* * * * *

(vi) * * *

(b) Where vent pipe outlets for tanks storing Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), are adjacent to buildings or public ways, they shall be located so that the vapors are released at a safe point outside of buildings and not less than 12 feet above the adjacent ground level. In order to aid their dispersion, vapors shall be discharged upward or horizontally away from closely adjacent walls. Vent outlets shall be located so that flammable vapors will not be trapped by eaves or other obstructions and shall be at least five feet from building openings.

* * * * *

(viii) * * *

(e) For Category 2 flammable liquids and Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), other than crude oils, gasolines, and asphalts, the fill pipe shall be so designed and installed as to minimize the possibility of generating static electricity. A fill pipe entering the top of a tank shall terminate within 6 inches of the bottom of the tank and shall be installed to avoid excessive vibration.

* * * * *

(3) * * *

(i) *Location.* Excavation for underground storage tanks shall be made with due care to avoid undermining of foundations of existing structures. Underground tanks or tanks under buildings shall be so located with respect to existing building foundations and supports that the loads carried by the latter cannot be transmitted to the tank. The distance from any part of a tank storing Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), to the nearest wall of any basement or pit shall be not less than 1 foot, and to any property line that may be built upon, not less than 3 feet. The distance from any part of a tank storing Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) or Category 4 flammable liquids to the nearest wall of any basement, pit or property line shall be not less than 1 foot.

* * * * *

(iv) * * *

(a) Location and arrangement of vents for Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C). Vent pipes from tanks storing Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), shall be so located that the discharge point is outside of buildings, higher than the fill pipe opening, and not less than 12 feet above the adjacent ground level. Vent pipes shall discharge only upward in order to disperse vapors. Vent pipes 2 inches or less in nominal inside

diameter shall not be obstructed by devices that will cause excessive back pressure. Vent pipe outlets shall be so located that flammable vapors will not enter building openings, or be trapped under eaves or other obstructions. If the vent pipe is less than 10 feet in length, or greater than 2 inches in nominal inside diameter, the outlet shall be provided with a vacuum and pressure relief device or there shall be an approved flame arrester located in the vent line at the outlet or within the approved distance from the outlet.

* * * * *

(*c*) Location and arrangement of vents for Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) or Category 4 flammable liquids. Vent pipes from tanks storing Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) or Category 4 flammable liquids shall terminate outside of the building and higher than the fill pipe opening. Vent outlets shall be above normal snow level. They may be fitted with return bends, coarse screens or other devices to minimize ingress of foreign material.

* * * * *

(v) * * *

(*d*) For Category 2 flammable liquids and Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), other than crude oils, gasolines, and asphalts, the fill pipe shall be so designed and installed as to minimize the possibility of generating static electricity by terminating within 6 inches of the bottom of the tank.

* * * * *

(4) * * *

(iv) * * *

(*e*) For Category 2 flammable liquids and Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), other than crude oils, gasoline, and asphalts, the fill pipe shall be so designed and installed as to minimize the possibility of generating static electricity by terminating within 6 inches of the bottom of the tank.

* * * * *

(d) * * *

(1) * * *

(ii) * * *

(*b*) Category 1, 2, or 3 flammable liquids in the fuel tanks of a motor vehicle, aircraft, boat, or portable or stationary engine;

* * * * *

(2) * * *

(iii) *Size.* Flammable liquid containers shall be in accordance with Table H–12, except that glass or plastic containers of no more than 1-gallon capacity may be used for a Category 1 or 2 flammable liquid if:

(*a*) * * *

(*2*) The user's process either would require more than 1 pint of a Category 1 flammable liquid or more than 1 quart of a Category 2 flammable liquid of a single assay lot to be used at one time, or would require the maintenance of an analytical standard liquid of a quality which is not met by the specified standards of liquids available, and the quantity of the analytical standard liquid required to be used in any one control process exceeds one-sixteenth the capacity of the container allowed under Table H–12 for the category of liquid; or

* * * * *

TABLE H–12—MAXIMUM ALLOWABLE SIZE OF CONTAINERS AND PORTABLE TANKS FOR FLAMMABLE LIQUIDS

Container type	Category 1	Category 2	Category 3	Category 4
Glass or approved plastic	1 pt	1 qt	1 gal	1 gal.
Metal (other than DOT drums)	1 gal	5 gal	5 gal	5 gal.
Safety cans	2 gal	5 gal	5 gal	5 gal.
Metal drums (DOT specifications)	60 gal	60 gal	60 gal	60 gal.
Approved portable tanks	660 gal	660 gal	660 gal	660 gal.

Note: Container exemptions: (a) Medicines, beverages, foodstuffs, cosmetics, and other common consumer items, when packaged according to commonly accepted practices, shall be exempt from the requirements of 1910.106(d)(2)(i) and (ii).

(3) * * *

(i) *Maximum capacity.* Not more than 60 gallons of Category 1, 2, or 3 flammable liquids, nor more than 120 gallons of Category 4 flammable liquids may be stored in a storage cabinet.

* * * * *

(4) * * *

(iii) *Wiring.* Electrical wiring and equipment located in inside storage rooms used for Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), shall be approved under subpart S of this part for Class I, Division 2 Hazardous Locations; for Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) and Category 4 flammable liquids, shall be approved for general use.

(iv) *Ventilation.* Every inside storage room shall be provided with either a gravity or a mechanical exhaust ventilation system. Such system shall be designed to provide for a complete change of air within the room at least six times per hour. If a mechanical exhaust system is used, it shall be controlled by a switch located outside of the door. The ventilating equipment and any lighting fixtures shall be operated by the same switch. A pilot light shall be installed adjacent to the switch if Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), are dispensed within the room. Where gravity ventilation is provided, the fresh air intake, as well as the exhaust outlet from the room, shall be on the exterior of the building in which the room is located.

* * * * *

BILLING CODE 4510–26–P

TABLE H-14 - INDOOR CONTAINER STORAGE

Category liquid	Storage level	Gallons	
		Protected storage maximum per pile	Unprotected storage maximum per pile
1	Ground and upper floors.....	2,750	660
		(50)	(12)
	Basement.....	Not permitted	Not permitted
2	Ground and upper floors.....	5,500	1,375
		(100)	(25)
	Basement.....	Not permitted	Not permitted
3 ..... FP<100F	Ground and upper floors.....	16,500	4,125
		(300)	(75)
	Basement.....	Not permitted	Not permitted
3 .... FP≥100F	Ground and upper floors.....	16,500	4,125
		(300)	(75)
	Basement.....	5,500	Not permitted
		(100)	
4 ...	Ground and upper floors.....	55,000	13,750
		(1,000)	(250)
	Basement.....	8,250	Not permitted
		(450)	

NOTE 1: When 2 or more categories of materials are stored in a single pile, the maximum gallonage permitted in that pile shall be the smallest of the 2 or more separate maximum gallonages.

NOTE 2: Aisles shall be provided so that no container is more than 12 ft. from an aisle. Main aisles shall be at least 3 ft. wide and side aisles at least 4 ft. wide.

NOTE 3: Each pile shall be separated from each other by at least 4 ft.

NOTE 4: FP means Flashpoint.

(Number in parenthesis indicate corresponding number of 55-gal. drums.)

TABLE H-15 - INDOOR PORTABLE TANK STORAGE

Category	Storage level	Gallons	
		Protected storage maximum per pile	Unprotected storage maximum per pile
1	Ground and upper floors	Not permitted	Not permitted
	Basement	Not permitted	Not permitted
2	Ground and upper floors	20,000	2,000
	Basement	Not permitted	Not permitted
3 FP<100F	Ground and upper floors	40,000	5,500
	Basement	Not permitted	Not permitted
3 FP≥100F	Ground and upper floors	40,000	5,500
	Basement	20,000	Not permitted
4	Ground and upper floors	60,000	22,000
	Basement	20,000	Not permitted

NOTE 1: When 1 or more categories of materials are stored in a single pile, the maximum gallonage permitted in that pile shall be the smallest of the 2 or more separate maximum gallonages.

NOTE 2: Aisles shall be provided so that no portable tank is more than 12 ft. from an aisle. Main aisles shall be at least 8 ft. wide and side aisles at least 4 ft. wide.

NOTE 3: Each pile shall be separated from each other by at least 4 ft.

NOTE 4: FP means Flashpoint.

TABLE H-16 - OUTDOOR CONTAINER STORAGE

1-Category	2-Maximum per pile	3-Distance between piles	4-Distance to property line that can be built upon	5-Distance to street, alley, public way
	gallons	feet	feet	feet
1	1,100	5	20	10
2	2,200	5	20	10
3 FP<100F.	4,400	5	20	10
3 FP≥100F.	8,800	5	10	5
4	22,000	5	10	5

NOTE 1: When 2 or more categories of materials are stored in a single pile, the maximum gallonage in that pile shall be the smallest of the 2 or more separate gallonages.

NOTE 2: Within 200 ft. of each container, there shall be a 12 ft. wide access way to permit approach of fire control apparatus.

NOTE 3: The distances listed apply to properties that have protection for exposures as defined. If there are exposures, and such protection for exposures does not exist, the distances in column 4 shall be doubled.

NOTE 4: When total quantity stored does not exceed 50 percent of maximum per pile, the distances in columns 4 and 5 may be reduced 50 percent, but not less than 3 ft.

NOTE 5: FP means flashpoint.

TABLE H-17 - OUTDOOR PORTABLE TANK STORAGE

1-Category	2-Maximum per pile	3-Distance between piles	4-Distance to property line that can be built upon	5-Distance to street, alley, public way
	gallons	feet	feet	feet
1	2,200	5	20	10
2	4,400	5	20	10
3 FP<100F.	8,800	5	20	10
3 FP≥100F.	17,600	5	10	5
4	44,000	5	10	5

NOTE 1: When 2 or more categories of materials are stored in a single pile, the maximum gallonage in that pile shall be the smallest of the 2 or more separate gallonages.

NOTE 2: Within 200 ft. of each portable tank, there shall be a 12 ft. wide access way to permit approach of fire control apparatus.

NOTE 3: The distances listed apply to properties that have protection for exposures as defined. If there are exposures, and such protection for exposures does not exist, the distances in column 4 shall be doubled.

NOTE 4: When total quantity stored does not exceed 50 percent of maximum per pile, the distances in columns 4 and 5 may be reduced 50 percent, but not less than 3 ft.

NOTE 5: FP means flashpoint.

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(7) * * *

(i) * * *

(*b*) At least one portable fire extinguisher having a rating of not less than 12–B units must be located not less than 10 feet, nor more than 25 feet, from any Category 1, 2, or 3 flammable liquid storage area located outside of a storage room but inside a building.

* * * * *

(e) * * *

(2) * * *

(ii) * * *

(*b*) * * *

(*1*) 25 gallons of Category 1 flammable liquids in containers

(*2*) 120 gallons of Category 2, 3, or 4 flammable liquids in containers

(*3*) 660 gallons of Category 2, 3, or 4 flammable liquids in a single portable tank.

* * * * *

(iv) * * *

(*a*) Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), shall be kept in covered containers when not actually in use.

* * * * *

(*c*) Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), may be used only where there are no open flames or other sources of ignition within the possible path of vapor travel.

* * * * *

(3) * * *

(v) * * *

(*a*) Areas as defined in paragraph (e)(3)(i) of this section using Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), shall be ventilated at a rate of not less than 1 cubic foot per minute per square foot of solid floor area. This shall be accomplished by natural or mechanical ventilation with discharge or exhaust to a safe location outside of the building. Provision shall be made for introduction of makeup air in such a manner as not to short circuit the ventilation. Ventilation shall be arranged to include all floor areas or pits where flammable vapors may collect.

(*b*) Equipment used in a building and the ventilation of the building shall be designed so as to limit flammable vapor-air mixtures under normal operating conditions to the interior of equipment, and to not more than 5 feet from equipment which exposes Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), to the air. Examples of such equipment are dispensing stations, open centrifuges, plate and frame filters, open vacuum filters, and surfaces of open equipment.

* * * * *

(4) * * *

(i) Tank vehicle and tank car loading or unloading facilities shall be separated from aboveground tanks, warehouses, other plant buildings or nearest line of adjoining property which may be built upon by a distance of 25 feet for Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), and 15 feet for Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) and Category 4 flammable liquids, measured from the nearest

position of any fill stem. Buildings for pumps or shelters for personnel may be a part of the facility. Operations of the facility shall comply with the appropriate portions of paragraph (f)(3) of this section.

* * * * *

(6) * * *

(ii) *Grounding.* Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), shall not be dispensed into containers unless the nozzle and container are electrically interconnected. Where the metallic floorplate on which the container stands while filling is electrically connected to the fill stem or where the fill stem is bonded to the container during filling operations by means of a bond wire, the provisions of this section shall be deemed to have been complied with.

(7) * * *

(i) * * *

(*c*) Locations where flammable vapor-air mixtures may exist under abnormal conditions and for a distance beyond Division 1 locations shall be classified Division 2 according to the requirements of subpart S of this part. These locations include an area within 20 feet horizontally, 3 feet vertically beyond a Division 1 area, and up to 3 feet above floor or grade level within 25 feet, if indoors, or 10 feet if outdoors, from any pump, bleeder, withdrawal fitting, meter, or similar device handling Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C). Pits provided with adequate mechanical ventilation within a Division 1 or 2 area shall be classified Division 2. If only Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) or Category 4 flammable liquids are handled, then ordinary electrical equipment is satisfactory though care shall be used in locating electrical apparatus to prevent hot metal from falling into open equipment.

* * * * *

(f) * * *

(1) * * *

(i) *Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C).* Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), shall be stored in closed containers, or in storage tanks above ground outside of buildings, or underground in accordance with paragraph (b) of this section.

(ii) *Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) and Category 4 flammable liquids.* Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) and Category 4 flammable liquids shall be stored in containers, or in tanks within buildings or above ground outside of buildings, or underground in accordance with paragraph (b) of this section.

* * * * *

(2) * * *

(ii) *Heating.* Rooms in which Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), are stored or handled shall be heated only by means not constituting a source of ignition, such as steam or hot water. Rooms containing heating appliances involving sources of ignition shall be located and arranged to prevent entry of flammable vapors.

(iii) * * *

(*a*) Ventilation shall be provided for all rooms, buildings, or enclosures in which Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), are pumped or dispensed. Design of ventilation systems shall take into account the relatively high specific gravity of the vapors. Ventilation may be provided by adequate openings in outside walls at floor level unobstructed except by louvers or coarse screens. Where natural ventilation is inadequate, mechanical ventilation shall be provided.

(*b*) Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), shall not be stored or handled within a building having a basement or pit into which flammable vapors may travel, unless such area is provided with ventilation designed to prevent the accumulation of flammable vapors therein.

(*c*) Containers of Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), shall not be drawn from or filled within buildings unless provision is made to prevent the accumulation of flammable vapors in hazardous concentrations. Where mechanical ventilation is required, it shall be kept in operation while flammable liquids with a flashpoint below 100 °F (37.8 °C) are being handled.

(3) * * *

(i) *Separation.* Tank vehicle and tank car loading or unloading facilities shall be separated from aboveground tanks, warehouses, other plant buildings or nearest line of adjoining property that may be built upon by a distance of 25 feet for Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), and 15 feet for Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) and Category 4 flammable liquids measured from the nearest position of any fill spout. Buildings for pumps or shelters for personnel may be a part of the facility.

(ii) *Category restriction.* Equipment such as piping, pumps, and meters used for the transfer of Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), between storage tanks and the fill stem of the loading rack shall not be used for the transfer of Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) or Category 4 flammable liquids.

* * * * *

(iv) * * *

(*a*) * * *

(*1*) Where Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), are loaded, or

(*2*) Where Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) or Category 4 flammable liquids are loaded into vehicles which may contain vapors from previous cargoes of Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C).

* * * * *

(*d*) * * *

(*2*) Where no Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), are handled at the loading facility and the tank vehicles loaded are used exclusively for Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) and Category 4 flammable liquids; and

* * * * *

(v) *Stray currents.* Tank car loading facilities where Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), are loaded through open domes shall be protected against stray currents by bonding the pipe to at least one rail and to the rack structure if of metal. Multiple lines entering the rack area shall be electrically bonded together. In addition, in areas where excessive stray currents are known to exist, all pipe entering the rack area shall be provided with insulating sections to electrically isolate the rack piping from the pipelines. No bonding between the tank car and the rack or piping is required during either loading or unloading of Category 3 flammable liquids with a

flashpoint at or above 100 °F (37.8 °C) or Category 4 flammable liquids.

(vi) *Container filling facilities.* Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), shall not be dispensed into containers unless the nozzle and container are electrically interconnected. Where the metallic floorplate on which the container stands while filling is electrically connected to the fill stem or where the fill stem is bonded to the container during filling operations by means of a bond wire, the provisions of this section shall be deemed to have been complied with.

(4) * * *

(viii) * * *

(*e*) In addition to the requirements of paragraph (f)(4)(viii)(*d*) of this section, each line conveying Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), leading to a wharf shall be provided with a readily accessible block valve located on shore near the approach to the wharf and outside of any diked area. Where more than one line is involved, the valves shall be grouped in one location.

* * * * *

(5) * * *

(i) *Application.* This paragraph (f)(5)(i) shall apply to areas where Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), are stored or handled. For areas where only Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) or Category 4 flammable liquids are stored or handled, the electrical equipment may be installed in accordance with the provisions of Subpart S of this part, for ordinary locations.

* * * * *

(6) *Sources of ignition.* Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), shall not be handled, drawn, or dispensed where flammable vapors may reach a source of ignition. Smoking shall be prohibited except in designated localities. ''No Smoking'' signs shall be conspicuously posted where hazard from flammable liquid vapors is normally present.

* * * * *

(8) *Fire control.* Suitable fire-control devices, such as small hose or portable fire extinguishers, shall be available to locations where fires are likely to occur. Additional fire-control equipment may be required where a tank of more than 50,000 gallons individual capacity contains Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), and where an unusual exposure hazard exists from surrounding property. Such additional fire-control equipment shall be sufficient to extinguish a fire in the largest tank. The design and amount of such equipment shall be in accordance with approved engineering standards.

* * * * *

(g) * * *

(1) * * *

(i) * * *

(*c*) Apparatus dispensing Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), into the fuel tanks of motor vehicles of the public shall not be located at a bulk plant unless separated by a fence or similar barrier from the area in which bulk operations are conducted.

* * * * *

(*e*) The provisions of paragraph (g)(1)(i)(*a*) of this section shall not prohibit the dispensing of flammable liquids with a flashpoint below 100 °F (37.8 °C) in the open from a tank vehicle to a motor vehicle. Such dispensing shall be permitted provided:

* * * * *

(*f*) Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), shall not be stored or handled within a building having a basement or pit into which flammable vapors may travel, unless such area is provided with ventilation designed to prevent the accumulation of flammable vapors therein.

* * * * *

(iii) * * *

(*a*) Except where stored in tanks as provided in paragraph (g)(1)(ii) of this section, no Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), shall be stored within any service station building except in closed containers of aggregate capacity not exceeding 60 gallons. One container not exceeding 60 gallons capacity equipped with an approved pump is permitted.

(*b*) Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), may be transferred from one container to another in lubrication or service rooms of a service station building provided the electrical installation complies with Table H–19 and provided that any heating equipment complies with paragraph (g)(6) of this section.

(*c*) Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) and Category 4 flammable liquids may be stored and dispensed inside service station buildings from tanks of not more than 120 gallons capacity each.

* * * * *

(v) *Dispensing into portable containers.* No delivery of any Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), shall be made into portable containers unless the container is constructed of metal, has a tight closure with screwed or spring cover, and is fitted with a spout or so designed so the contents can be poured without spilling.

* * * * *

(3) * * *

(iv) * * *

(*a*) Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), shall be transferred from tanks by means of fixed pumps so designed and equipped as to allow control of the flow and to prevent leakage or accidental discharge.

(*b*)(*1*) Only listed devices may be used for dispensing Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C). No such device may be used if it shows evidence of having been dismantled.

(*2*) Every dispensing device for Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), installed after December 31, 1978, shall contain evidence of listing so placed that any attempt to dismantle the device will result in damage to such evidence, visible without disassembly or dismounting of the nozzle.

(*c*) Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), shall not be dispensed by pressure from drums, barrels, and similar containers. Approved pumps taking suction through the top of the container or approved self-closing faucets shall be used.

* * * * *

(v) * * *

(*a*) This paragraph (g)(3)(v) shall apply to systems for dispensing Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), where such liquids are transferred from storage to individual or multiple dispensing units by pumps located elsewhere than at the dispensing units.

* * * * *

(vi) * * *

(*a*) A listed manual or automatic-closing type hose nozzle valve shall be provided on dispensers used for the dispensing of Category 1 or 2 flammable

liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C).

* * * * *

(4) * * *

(iii) * * *

BILLING CODE 4510–26–P

TABLE H-19 - ELECTRICAL EQUIPMENT HAZARDOUS AREAS - SERVICE STATIONS

Location	Class I Group D division	Extent of classified area
Underground tank:		
Fill opening.....	1	Any pit, box or space below grade level, any part of which is within the Division 1 or 2 classified area.
	2	Up to 18 inches above grade level within a horizontal radius of 10 feet from a loose fill connection and within a horizontal radius of 5 feet from a tight fill connection.
Vent-Discharging Upward.	1	Within 3 feet of open end of vent, extending in all directions.
	2	Area between 3 feet and 5 feet of open end of vent, extending in all directions.
Dispenser:		
Pits	1	Any pit, box or space below grade level, any part of which is within the Division 1 or 2 classified area.
Dispenser enclosure ..	1	The area 4 feet vertically above base within the enclosure and 18 inches horizontally in all directions.
Outdoor	2	Up to 18 inches above grade level within 20 feet horizontally of any edge of enclosure.
Indoor:		
With mechanical ventilation	2	Up to 18 inches above grade or floor level within 20 feet horizontally of any edge of enclosure.
With gravity ventilation	2	Up to 18 inches above grade or floor level within 25 feet horizontally of any edge of enclosure.

Remote pump - Outdoor.	1	Any pit, box or space below grade level if any part is within a horizontal distance of 10 feet from any edge of the pump.
	2	Within 3 feet of any edge of the pump, extending in all directions. Also up to 18 inches above grade level within 10 feet horizontally from any edge of the pump.
Remote pump - Indoor..	1	Entire area within any pit.
	2	Within 5 feet of any edge of pump, extending in all directions. Also up to 3 feet above floor or grade level within 25 feet horizontally from any edge of pump.
Lubrication or service room	1	Entire area within any pit.
	2	Area up to 18 inches above floor or grade level within entire lubrication room.
Dispenser for Liquids with a flashpoint below 100 ^{0}F (37.8 ^{o}C)(1).....	2	Within 3 feet of any fill or dispensing point, extending in all directions.
Special enclosure inside building per 1910.106(f)(1)(ii).	1	Entire enclosure.
Sales, storage and rest rooms.....	(2)	If there is any opening to these rooms within the extent of a Division 1 area, the entire room shall be classified as Division 1.

Footnote (1) Category 1 or 2 flammable liquids, or for Category 3 flammable liquids with a flashpoint below 100 ^{0}F (37.8 ^{0}C).
Footnote(2) Ordinary

BILLING CODE 4510–26–C

(*d*) Piping handling Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), shall be grounded to control stray currents.

(5) * * *

(i) *Application.* This paragraph (g)(5) shall apply to areas where Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), are stored or handled. For areas where Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) or Category 4 flammable liquids are stored or handled the electrical equipment may be installed in accordance with the provisions of subpart S of this part, for ordinary locations.

* * * * *

(6) * * *

(iv) *Work areas.* Heating equipment using gas or oil fuel may be installed in the lubrication, sales, or service room where there is no dispensing or transferring of Category 1 or 2 flammable liquids or 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), provided the bottom of the combustion chamber is at least 18 inches above the floor and the heating equipment is protected from physical damage by vehicles. Heating equipment using gas or oil fuel listed for use in garages may be installed in the lubrication or service room where Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), are dispensed provided the equipment is installed at least 8 feet above the floor.

* * * * *

(7) *Drainage and waste disposal.* Provision shall be made in the area where Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), are dispensed to prevent spilled liquids from flowing into the interior of service station buildings. Such provision may be by grading driveways, raising door sills, or other equally effective means. Crankcase drainings and flammable liquids shall not be dumped into sewers but shall be stored in tanks or drums

outside of any building until removed from the premises.

* * * * *

(h) * * *

(3) * * *

(i) * * *

(*a*) Processing buildings shall be of fire-resistance or noncombustible construction, except heavy timber construction with load-bearing walls may be permitted for plants utilizing only stable Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) or Category 4 flammable liquids. Except as provided in paragraph (h)(2)(ii) of this section or in the case of explosion resistant walls used in conjunction with explosion relieving facilities, see paragraph (h)(3)(iv) of this section, load-bearing walls are prohibited. Buildings shall be without basements or covered pits.

* * * * *

(iii) * * *

(*b*) Equipment used in a building and the ventilation of the building shall be designed so as to limit flammable vapor-air mixtures under normal operating conditions to the interior of equipment, and to not more than 5 feet from equipment which exposes Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), to the air. Examples of such equipment are dispensing stations, open centrifuges, plate and frame filters, open vacuum filters, and surfaces of open equipment.

(iv) *Explosion relief.* Areas where Category 1 or unstable liquids are processed shall have explosion venting through one or more of the following methods:

* * * * *

(5) *Tank vehicle and tank car loading and unloading.* Tank vehicle and tank car loading or unloading facilities shall be separated from aboveground tanks, warehouses, other plant buildings, or nearest line of adjoining property which may be built upon by a distance of 25 feet for Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), and 15 feet for Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) and Category 4 flammable liquids measured from the nearest position of any fill stem. Buildings for pumps or shelters for personnel may be a part of the facility. Operations of the facility shall comply with the appropriate portions of paragraph (f)(3) of this section.

* * * * *

(7) * * *

(i) * * *

(*b*) Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), shall not be dispensed into containers unless the nozzle and container are electrically interconnected. Where the metallic floorplate on which the container stands while filling is electrically connected to the fill stem or where the fill stem is bonded to the container during filling operations by means of a bond wire, the provisions of this section shall be deemed to have been complied with.

* * * * *

(iii) * * *

(*c*) Locations where flammable vapor-air mixtures may exist under abnormal conditions and for a distance beyond Division 1 locations shall be classified Division 2 according to the requirements of subpart S of this part. These locations include an area within 20 feet horizontally, 3 feet vertically beyond a Division 1 area, and up to 3 feet above floor or grade level within 25 feet, if indoors, or 10 feet if outdoors, from any pump, bleeder, withdrawal fitting, meter, or similar device handling Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C). Pits provided with adequate mechanical ventilation within a Division 1 or 2 area shall be classified Division 2. If Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) or Category 4 flammable liquids only are handled, then ordinary electrical equipment is satisfactory though care shall be used in locating electrical apparatus to prevent hot metal from falling into open equipment.

* * * * *

(j) *Scope.* This section applies to the handling, storage, and use of flammable liquids with a flashpoint at or below 199.4 °F (93 °C) unless otherwise noted. This section does not apply to:

* * * * *

■ 5. Amend § 1910.107 as follows:

■ A. Amend paragraphs (c)(9)(i), (e)(1), (e)(2), (e)(3), (e)(6)(iv), (e)(8), and (e)(9) by removing the terms ''flammable or combustible liquids'' wherever it appears and adding in its place the phrase ''flammable liquids or liquids with a flashpoint greater than 199.4 °F (93 °C)''; and

■ B. Revise the heading of paragraph (e), and (e)(4) to read as follows:

§ 1910.107 Spray finishing using flammable and combustible materials.

* * * * *

(e) *Flammable liquids and liquids with a flashpoint greater than 199.4 °F (93 °C)*

* * * * *

(4) *Transferring liquids.* Except as provided in paragraph (e)(5) of this section the withdrawal of flammable liquids and liquids with a flashpoint greater than 199.4 °F (93 °C) from containers having a capacity of greater than 60 gallons shall be by approved pumps. The withdrawal of flammable liquids or liquids with a flashpoint greater than 199.4 °F (93 °C) from containers and the filling of containers, including portable mixing tanks, shall be done only in a suitable mixing room or in a spraying area when the ventilating system is in operation. Adequate precautions shall be taken to protect against liquid spillage and sources of ignition.

* * * * *

■ 6. Amend § 1910.119 to revise paragraphs (a)(1)(ii) introductory text, (a)(1)(ii)(B) and the definition of ''Trade secret'' in paragraph (b) to read as follows:

§ 1910.119 Process safety management of highly hazardous chemicals.

* * * * *

(a) * * *

(1) * * *

(ii) A process which involves a Category 1 flammable gas (as defined in 1910.1200(c)) or a flammable liquid with a flashpoint below 100 °F (37.8 °C) on site in one location, in a quantity of 10,000 pounds (4535.9 kg) or more except for:

* * * * *

(B) Flammable liquids with a flashpoint below 100 °F (37.8 °C) stored in atmospheric tanks or transferred which are kept below their normal boiling point without benefit of chilling or refrigeration.

* * * * *

(b) * * *

Trade secret means any confidential formula, pattern, process, device, information or compilation of information that is used in an employer's business, and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it. *See* Appendix E to § 1910.1200—Definition of a Trade Secret (which sets out the criteria to be used in evaluating trade secrets).

* * * * *

■ 7. In § 1910.120, revise the definition of the term *Health hazard* in paragraph (a)(3) to read as follows:

§ 1910.120 Hazardous waste operations and emergency response.

(a) * * *

(3) * * *

Health hazard means a chemical or a pathogen where acute or chronic health

effects may occur in exposed employees. It also includes stress due to temperature extremes. The term *health hazard* includes chemicals that are classified in accordance with the Hazard Communication Standard, 29 CFR 1910.1200, as posing one of the following hazardous effects: Acute toxicity (any route of exposure); skin corrosion or irritation; serious eye damage or eye irritation; respiratory or skin sensitization; germ cell mutagenicity; carcinogenicity; reproductive toxicity; specific target organ toxicity (single or repeated exposure); aspiration toxicity or simple asphyxiant. (*See* Appendix A to § 1910.1200—Health Hazard Criteria (Mandatory) for the criteria for determining whether a chemical is classified as a health hazard.)

* * * * *

■ 8. Amend paragraph (d) of § 1910.123 by removing the definition of ''Combustible liquid'' and revising the definitions of the terms ''Flammable liquid'' and ''Flashpoint'' to read as follows:

§ 1910.123 Dipping and coating operations: Coverage and definitions.

* * * * *

(d) * * *

Flammable liquid means any liquid having a flashpoint at or below 199.4 °F (93 °C).

Flashpoint means the minimum temperature at which a liquid gives off a vapor in sufficient concentration to ignite if tested in accordance with the test methods in Appendix B to § 1910.1200—Physical Hazard Criteria.

* * * * *

■ 9. In § 1910.124, revise paragraph (c)(2) introductory text to read as follows:

§ 1910.124 General requirements for dipping and coating operations.

* * * * *

(c) * * *

(2) You must ensure that any exhaust air re-circulated from a dipping or coating operation using flammable liquids or liquids with flashpoints greater than 199.4 °F (93 °C) is:

* * * * *

■ 10. Amend § 1910.125 by revising the section heading and the introductory text (including the table) to read as follows:

§ 1910.125 Additional requirements for dipping and coating operations that use flammable liquids or liquids with flashpoints greater than 199.4 °F (93 °C).

If you use flammable liquids, you must comply with the requirements of this section as well as the requirements of §§ 1910.123, 1910.124, and 1910.126, as applicable.

You must also comply with this section if:	And:
• The flashpoint of the liquid is 199.4 °F (93 °C) or above	• The liquid is heated as part of the operation; or • A heated object is placed in the liquid.

■ 11. Amend the introductory text of paragraph (c) of § 1910.126 by removing the words ''or combustible''.

Subpart Q—[Amended]

■ 12. The authority citation for subpart Q continues to read as follows:

Authority: Sections 4, 6, and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, and 657); Secretary of Labor's Orders Nos. 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736), 1–90 (55 FR 9033), 6–96 (62 FR 111), 3–2000 (65 FR 50017), 5–2002 (67 FR 65008), 5–2007 (72 FR 31159), 4–2010 (75 FR 55355), or 1–2012 (77 FR 3912), as applicable; and 29 CFR part 1911.

■ 13. Amend § 1910.252 as follows;
■ A. Revise paragraph (c)(1)(iv);
■ B. Add new paragraphs (c)(1)(v) and (c)(1)(vi).

§ 1910.252 General requirements.

* * * * *

(c) * * *

(1) * * *

(iv) *Hazard communication.* The employer shall include the potentially hazardous materials employed in fluxes, coatings, coverings, and filler metals, all of which are potentially used in welding and cutting, or are released to the atmosphere during welding and cutting, in the program established to comply with the Hazard Communication Standard (HCS) (§ 1910.1200). The employer shall ensure that each employee has access to labels on containers of such materials and safety data sheets, and is trained in accordance with the provisions of § 1910.1200. Potentially hazardous materials shall include but not be limited to the materials itemized in paragraphs (c)(5) through (c)(12) of this section.

(v) *Additional considerations for hazard communication in welding, cutting, and brazing.* (A) The suppliers shall determine and shall label in accordance with § 1910.1200 any hazards associated with the use of their materials in welding, cutting, and brazing.

(B) In addition to any requirements imposed by § 1910.1200, all filler metals and fusible granular materials shall carry the following notice, as a minimum, on tags, boxes, or other containers:

Do not use in areas without adequate ventilation. *See* ANSI Z49.1–1967 Safety in Welding, Cutting, and Allied Processes published by the American Welding Society.

(C) Where brazing (welding) filler metals contain cadmium in significant amounts, the labels shall indicate the hazards associated with cadmium including cancer, lung and kidney effects, and acute toxicity effects.

(D) Where brazing and gas welding fluxes contain fluorine compounds, the labels shall indicate the hazards associated with fluorine compounds including eye and respiratory tract effects.

(vi) Prior to June 1, 2015, employers may include the following information on labels in lieu of the labeling requirements in paragraph (c)(1)(v) of this section:

(A) All filler metals and fusible granular materials shall carry the following notice, as a minimum, on tags, boxes, or other containers:

CAUTION

Welding may produce fumes and gases hazardous to health. Avoid breathing these fumes and gases. Use adequate ventilation. *See* ANSI Z49.1–1967 Safety in Welding and Cutting published by the American Welding Society.

(B) Brazing (welding) filler metals containing cadmium in significant amounts shall carry the following notice on tags, boxes, or other containers:

WARNING
CONTAINS CADMIUM—POISONOUS FUMES MAY BE FORMED ON HEATING

Do not breathe fumes. Use only with adequate ventilation such as fume collectors, exhaust ventilators, or air-supplied respirators. *See* ANSI Z49.1–1967. If chest pain, cough, or fever develops after use call physician immediately.

(C) Brazing and gas welding fluxes containing fluorine compounds shall have a cautionary wording to indicate that they contain fluorine compounds. One such cautionary wording recommended by the American Welding

Society for brazing and gas welding fluxes reads as follows:

CAUTION
CONTAINS FLUORIDES

This flux when heated gives off fumes that may irritate eyes, nose and throat.

1. Avoid fumes—use only in well-ventilated spaces.

2. Avoid contact of flux with eyes or skin.

3. Do not take internally.

* * * * *

Subpart Z—[Amended]

■ 14. Revise the authority citation for subpart Z to read as follows:

Authority: Sections 4, 6, 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); Secretary of Labor's Order No. 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736), 1–90 (55 FR 9033), 6–96 (62 FR 111), 3–2000 (65 FR 50017), 5–2002 (67 FR 65008), 5–2007 (72 FR 31159), 4–2010 (75 FR 55355), or 1–2012 (77 FR 3912), as applicable; and 29 CFR part 1911.

All of subpart Z issued under section 6(b) of the Occupational Safety and Health Act of 1970, except those substances that have exposure limits listed in Tables Z–1, Z–2, and Z–3 of 29 CFR 1910.1000. The latter were issued under section 6(a) (29 U.S.C. 655(a)).

Section 1910.1000, Tables Z–1, Z–2 and Z–3 also issued under 5 U.S.C. 553, but not under 29 CFR part 1911 except for the arsenic (organic compounds), benzene, cotton dust, and chromium (VI) listings.

Section 1910.1001 also issued under section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704) and 5 U.S.C. 553.

Section 1910.1002 also issued under 5 U.S.C. 553, but not under 29 U.S.C. 655 or 29 CFR part 1911.

Sections 1910.1018, 1910.1029, and 1910.1200 also issued under 29 U.S.C. 653.

Section 1910.1030 also issued under Pub. L. 106–430, 114 Stat. 1901.

Section 1910.1201 also issued under 49 U.S.C. 1801–1819 and 5 U.S.C. 533.

■ 15. Amend § 1910.1001 as follows:

■ A. Remove paragraph (j)(5);

■ B. Redesignate paragraphs (j)(1) through (j)(4) as paragraphs (j)(2) through (j)(5);

■ C. Revise paragraphs (h)(2)(iv), (h)(3)(vi), the newly redesignated paragraphs (j)(4), (j)(5), and the introductory text of paragraph (j)(6);

■ D. Add new paragraph (j)(1);

■ E. Amend Appendix F, to § 1910.1001, Paragraph [A] (6) by removing ''(j)(4)'' and adding in its place ''(j)(5)''.

The revisions and additions read as follows:

§ 1910.1001 Asbestos.

* * * * *

(h) * * *

(2) * * *

(iv) The employer shall ensure that containers of contaminated protective devices or work clothing, which are to be taken out of change rooms or the workplace for cleaning, maintenance or disposal, bear labels in accordance with paragraph (j) of this section.

(3) * * *

(vi) The employer shall ensure that contaminated clothing is transported in sealed impermeable bags, or other closed, impermeable containers, and labeled in accordance with paragraph (j) of this section.

* * * * *

(j) * * *

(1) *Hazard communication—general.* (i) Chemical manufacturers, importers, distributors and employers shall comply with all requirements of the Hazard Communication Standard (HCS) (§ 1910.1200) for asbestos.

(ii) In classifying the hazards of asbestos at least the following hazards are to be addressed: Cancer and lung effects.

(iii) Employers shall include asbestos in the hazard communication program established to comply with the HCS (§ 1910.1200). Employers shall ensure that each employee has access to labels on containers of asbestos and to safety data sheets, and is trained in accordance with the requirements of HCS and paragraph (j)(7) of this section.

* * * * *

(4) *Warning signs*—(i) *Posting.* Warning signs shall be provided and displayed at each regulated area. In addition, warning signs shall be posted at all approaches to regulated areas so that an employee may read the signs and take necessary protective steps before entering the area.

(ii) *Sign specifications:*

(A) The warning signs required by paragraph (j)(4)(i) of this section shall bear the following legend:

DANGER
ASBESTOS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
AUTHORIZED PERSONNEL ONLY

(B) In addition, where the use of respirators and protective clothing is required in the regulated area under this section, the warning signs shall include the following:

WEAR RESPIRATORY PROTECTION AND PROTECTIVE CLOTHING IN THIS AREA

(C) Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (j)(4)(ii)(A) of this section:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY

(D) Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (j)(4)(ii)(B) of this section:

RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA

(iii) The employer shall ensure that employees working in and contiguous to regulated areas comprehend the warning signs required to be posted by paragraph (j)(4)(i) of this section. Means to ensure employee comprehension may include the use of foreign languages, pictographs and graphics.

(iv) At the entrance to mechanical rooms/areas in which employees reasonably can be expected to enter and which contain ACM and/or PACM, the building owner shall post signs which identify the material which is present, its location, and appropriate work practices which, if followed, will ensure that ACM and/or PACM will not be disturbed. The employer shall ensure, to the extent feasible, that employees who come in contact with these signs can comprehend them. Means to ensure employee comprehension may include the use of foreign languages, pictographs, graphics, and awareness training.

(5) *Warning labels*—(i) *Labeling.* Labels shall be affixed to all raw materials, mixtures, scrap, waste, debris, and other products containing asbestos fibers, or to their containers. When a building owner or employer identifies previously installed ACM and/or PACM, labels or signs shall be affixed or posted so that employees will be notified of what materials contain ACM and/or PACM. The employer shall attach such labels in areas where they will clearly be noticed by employees who are likely to be exposed, such as at the entrance to mechanical room/areas. Signs required by paragraph (j) of this section may be posted in lieu of labels so long as they contain the information required for labeling.

(ii) *Label specifications.* In addition to the requirements of paragraph (j)(1), the employer shall ensure that labels of bags or containers of protective clothing and equipment, scrap, waste, and debris containing asbestos fibers include the following information:

DANGER
CONTAINS ASBESTOS FIBERS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
DO NOT BREATHE DUST
AVOID CREATING DUST

(iii) Prior to June 1, 2015, employers may include the following information on raw materials, mixtures or labels of bags or containers of protective clothing and equipment, scrap, waste, and debris containing asbestos fibers in lieu of the labeling requirements in paragraphs (j)(1)(i) and (j)(5)(ii) of this section:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

(6) The provisions for labels and for safety data sheets required by paragraph (j) of this section do not apply where:

* * * * *

■ 16. Amend § 1910.1003 as follows:
■ A. In the last sentence in paragraph (c)(4)(v) remove the words ''paragraphs (e)(2), (3), and (4)'' and add the words ''paragraph (e)'' in their place;
■ B. Revise the heading of paragraph (e);
■ C. Revise paragraphs (e)(1) and (e)(2).
■ D. Remove paragraph (e)(3); and
■ E. Redesignate paragraphs (e)(4) and (e)(5) as (e)(3) and (e)(4).

The revisions read as follows:

§ 1910.1003 13 Carcinogens (4-nitrobiphenyl, etc.).

* * * * *

(e) *Communication of hazards*—(1) *Hazard communication.* (i) Chemical manufacturers, importers, distributors and employers shall comply with all requirements of the Hazard Communication Standard (HCS) (§ 1910.1200) for each carcinogen listed in paragraph (e)(1)(iv) of this section.

(ii) In classifying the hazards of carcinogens listed in paragraph (e)(1)(iv) of this section, at least the hazards listed in paragraph (e)(1)(iv) are to be addressed.

(iii) Employers shall include the carcinogens listed in paragraph (e)(1)(iv) of this section in the hazard communication program established to comply with the HCS (§ 1910.1200). Employers shall ensure that each employee has access to labels on containers of the carcinogens listed in paragraph (e)(1)(iv) and to safety data sheets, and is trained in accordance with the requirements of HCS and paragraph (e)(4) of this section.

(iv) List of Carcinogens:

(A) 4-Nitrobiphenyl: Cancer.

(B) alpha-Naphthylamine: Cancer; skin irritation; and acute toxicity effects.

(C) Methyl chloromethyl ether: Cancer; skin, eye and respiratory effects; acute toxicity effects; and flammability.

(D) 3,3′-Dichlorobenzidine (and its salts): Cancer and skin sensitization.

(E) bis-Chloromethyl ether: Cancer; skin, eye, and respiratory tract effects; acute toxicity effects; and flammability.

(F) beta-Naphthylamine: Cancer and acute toxicity effects.

(G) Benzidine: Cancer and acute toxicity effects.

(H) 4-Aminodiphenyl: Cancer.

(I) Ethyleneimine: Cancer; mutagenicity; skin and eye effects; liver effects; kidney effects; acute toxicity effects; and flammability.

(J) beta-Propiolactone: Cancer; skin irritation; eye effects; and acute toxicity effects.

(K) 2-Acetylaminofluorene: Cancer.

(L) 4-Dimethylaminoazo-benzene: Cancer; skin effects; and respiratory tract irritation.

(M) N-Nitrosodimethylamine: Cancer; liver effects; and acute toxicity effects.

(2) *Signs.* (i) The employer shall post entrances to regulated areas with signs bearing the legend:

DANGER
(CHEMICAL IDENTIFICATION)
MAY CAUSE CANCER
AUTHORIZED PERSONNEL ONLY

(ii) The employer shall post signs at entrances to regulated areas containing operations covered in paragraph (c)(5) of this section. The signs shall bear the legend:

DANGER
(CHEMICAL IDENTIFICATION)
MAY CAUSE CANCER
WEAR AIR-SUPPLIED HOODS,
IMPERVIOUS SUITS, AND PROTECTIVE EQUIPMENT IN THIS AREA
AUTHORIZED PERSONNEL ONLY

(iii) Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (e)(2)(i) of this section:

CANCER-SUSPECT AGENT
AUTHORIZED PERSONNEL ONLY

(iv) Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (e)(2)(ii) of this section:

CANCER-SUSPECT AGENT EXPOSED IN THIS AREA
IMPERVIOUS SUIT INCLUDING GLOVES, BOOTS, AND AIR-SUPPLIED HOOD REQUIRED AT ALL TIMES
AUTHORIZED PERSONNEL ONLY

(v) Appropriate signs and instructions shall be posted at the entrance to, and exit from, regulated areas, informing employees of the procedures that must be followed in entering and leaving a regulated area.

* * * * *

■ 17. Revise § 1910.1017 paragraph (l) to read as follows:

§ 1910.1017 Vinyl chloride.

* * * * *

(l) *Communication of hazards*—(1) *Hazard communication—general.* (i) Chemical manufacturers, importers, distributors and employers shall comply with all requirements of the Hazard Communication Standard (HCS) (§ 1910.1200) for vinyl chloride and polyvinyl chloride.

(ii) In classifying the hazards of vinyl chloride at least the following hazards are to be addressed: Cancer; central nervous system effects; liver effects; blood effects; and flammability.

(iii) Employers shall include vinyl chloride in the hazard communication program established to comply with the HCS (§ 1910.1200). Employers shall ensure that each employee has access to labels on containers of vinyl chloride and to safety data sheets, and is trained in accordance with the requirements of HCS and paragraph (j) of this section.

(2) *Signs.* (i) The employer shall post entrances to regulated areas with legible signs bearing the legend:

DANGER
VINYL CHLORIDE
MAY CAUSE CANCER
AUTHORIZED PERSONNEL ONLY

(ii) The employer shall post signs at areas containing hazardous operations or where emergencies currently exist. The signs shall be legible and bear the legend:

DANGER
VINYL CHLORIDE
MAY CAUSE CANCER
WEAR RESPIRATORY PROTECTION AND PROTECTIVE CLOTHING IN THIS AREA
AUTHORIZED PERSONNEL ONLY

(iii) Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (l)(2)(i) of this section:

CANCER-SUSPECT AGENT AREA
AUTHORIZED PERSONNEL ONLY

(iv) Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (l)(2)(ii) of this section:

CANCER-SUSPECT AGENT IN THIS AREA
PROTECTIVE EQUIPMENT REQUIRED
AUTHORIZED PERSONNEL ONLY

(3) *Labels.* (i) In addition to the other requirements in this paragraph (l), the employer shall ensure that labels for containers of polyvinyl chloride resin waste from reactors or other waste contaminated with vinyl chloride are legible and include the following information:

CONTAMINATED WITH VINYL CHLORIDE
MAY CAUSE CANCER

(ii) Prior to June 1, 2015, employers may include the following information on labels of containers of polyvinyl chloride resin waste from reactors or other waste contaminated with vinyl

chloride in lieu of the labeling requirements in paragraphs (l)(3)(i) of this section:

CONTAMINATED WITH VINYL CHLORIDE
CANCER-SUSPECT AGENT

(4) Prior to June 1, 2015, employers may include the following information for containers of polyvinyl chloride in lieu of the labeling requirements in paragraphs (l)(1)(i) of this section:

POLYVINYL CHLORIDE (OR TRADE NAME)
Contains
VINYL CHLORIDE
VINYL CHLORIDE IS A CANCER-SUSPECT AGENT

(5)(i) Prior to June 1, 2015, employers may include either the following information in either paragraph (l)(5)(i) or (l)(5)(ii) of this section on containers of vinyl chloride in lieu of the labeling requirements in paragraph (l)(1)(i) of this section:

VINYL CHLORIDE
EXTREMELY FLAMMABLE GAS UNDER PRESSURE
CANCER-SUSPECT AGENT

(ii) In accordance with 49 CFR Parts 170–189, with the additional legend applied near the label or placard:

CANCER-SUSPECT AGENT

(6) No statement shall appear on or near any required sign, label, or instruction which contradicts or detracts from the effect of any required warning, information, or instruction.

* * * * *

■ 18. Revise § 1910.1018 paragraphs (j)(2)(vii) and (p) to read as follows:

§ 1910.1018 Inorganic arsenic.

* * * * *

(j) * * *

(2) * * *

(vii) Labels on contaminated protective clothing and equipment.

(A) The employer shall ensure that the containers of contaminated protective clothing and equipment in the workplace or which are to be removed from the workplace are labeled and that the labels include the following information:

DANGER: CONTAMINATED WITH INORGANIC ARSENIC. MAY CAUSE CANCER. DO NOT REMOVE DUST BY BLOWING OR SHAKING. DISPOSE OF INORGANIC ARSENIC CONTAMINATED WASH WATER IN ACCORDANCE WITH APPLICABLE LOCAL, STATE OR FEDERAL REGULATIONS.

(B) Prior to June 1, 2015, employers may include the following information on containers of protective clothing and equipment in lieu of the labeling requirements in paragraphs (j)(2)(vii) of this section:

CAUTION: Clothing contaminated with inorganic arsenic; do not remove dust by blowing or shaking. Dispose of inorganic arsenic contaminated wash water in accordance with applicable local, State or Federal regulations.

* * * * *

(p) *Communication of hazards*—(1) *Hazard communication—General.* (i) Chemical manufacturers, importers, distributors and employers shall comply with all requirements of the Hazard Communication Standard (HCS) (§ 1910.1200) for inorganic arsenic.

(ii) In classifying the hazards of inorganic arsenic at least the following hazards are to be addressed: Cancer; liver effects; skin effects; respiratory irritation; nervous system effects; and acute toxicity effects.

(iii) Employers shall include inorganic arsenic in the hazard communication program established to comply with the HCS (§ 1910.1200). Employers shall ensure that each employee has access to labels on containers of inorganic arsenic and to safety data sheets, and is trained in accordance with the requirements of HCS and paragraph (o) of this section.

(iv) The employer shall ensure that no statement appears on or near any sign or label required by this paragraph (p) which contradicts or detracts from the meaning of the required sign or label.

(2) *Signs.* (i) The employer shall post signs demarcating regulated areas bearing the legend:

DANGER
INORGANIC ARSENIC
MAY CAUSE CANCER
DO NOT EAT, DRINK OR SMOKE
WEAR RESPIRATORY PROTECTION IN THIS AREA
AUTHORIZED PERSONNEL ONLY

(ii) Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (p)(2)(i) of this section:

DANGER
INORGANIC ARSENIC
CANCER HAZARD
AUTHORIZED PERSONNEL ONLY
NO SMOKING OR EATING
RESPIRATOR REQUIRED

(iii) The employer shall ensure that signs required by this paragraph (p) are illuminated and cleaned as necessary so that the legend is readily visible.

(3)(i) Prior to June 1, 2015, in lieu of the labeling requirements in paragraphs (p)(1)(i) of this section, employers may apply precautionary labels to all shipping and storage containers of inorganic arsenic, and to all products containing inorganic arsenic, bearing the following legend:

DANGER
CONTAINS INORGANIC ARSENIC
CANCER HAZARD
HARMFUL IF INHALED OR SWALLOWED
USE ONLY WITH ADEQUATE VENTILATION OR RESPIRATORY PROTECTION

(ii) Labels are not required when the inorganic arsenic in the product is bound in such a manner so as to make unlikely the possibility of airborne exposure to inorganic arsenic. (Possible examples of products not requiring labels are semiconductors, light emitting diodes and glass.)

* * * * *

■ 19. Amend § 1910.1025 as follows:

■ A. Revise paragraph (g)(2)(vii) and paragraph (m);

■ B. Revise Appendix B to § 1910.1025, paragraph xi.

The revisions read as follows:

§ 1910.1025 Lead.

* * * * *

(g) * * *

(2) * * *

(vii) Labeling of contaminated protective clothing and equipment.

(A) The employer shall ensure that labels of bags or containers of contaminated protective clothing and equipment include the following information:

DANGER: CLOTHING AND EQUIPMENT CONTAMINATED WITH LEAD. MAY DAMAGE FERTILITY OR THE UNBORN CHILD. CAUSES DAMAGE TO THE CENTRAL NERVOUS SYSTEM. DO NOT EAT, DRINK OR SMOKE WHEN HANDLING. DO NOT REMOVE DUST BY BLOWING OR SHAKING. DISPOSE OF LEAD CONTAMINATED WASH WATER IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, OR FEDERAL REGULATIONS.

(B) Prior to June 1, 2015, employers may include the following information on bags or containers of contaminated protective clothing and equipment in lieu of the labeling requirements in paragraphs (g)(2)(vii)(A) of this section:

CAUTION: CLOTHING CONTAMINATED WITH LEAD. DO NOT REMOVE DUST BY BLOWING OR SHAKING. DISPOSE OF LEAD CONTAMINATED WASH WATER IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, OR FEDERAL REGULATIONS.

* * * * *

(m) *Communication of hazards*—(1) *Hazard communication—general.* (i) Chemical manufacturers, importers, distributors and employers shall comply with all requirements of the Hazard Communication Standard (HCS) (§ 1910.1200) for lead.

(ii) In classifying the hazards of lead at least the following hazards are to be addressed: Reproductive/developmental

toxicity; central nervous system effects; kidney effects; blood effects; and acute toxicity effects.

(iii) Employers shall include lead in the hazard communication program established to comply with the HCS (§ 1910.1200). Employers shall ensure that each employee has access to labels on containers of lead and to safety data sheets, and is trained in accordance with the requirements of HCS and paragraph (l) of this section.

(2) *Signs.* (i) The employer shall post the following warning signs in each work area where the PEL is exceeded:

DANGER
LEAD
MAY DAMAGE FERTILITY OR THE UNBORN CHILD
CAUSES DAMAGE TO THE CENTRAL NERVOUS SYSTEM
DO NOT EAT, DRINK OR SMOKE IN THIS AREA

(ii) The employer shall ensure that no statement appears on or near any sign required by this paragraph (m)(2) which contradicts or detracts from the meaning of the required sign.

(iii) The employer shall ensure that signs required by this paragraph (m)(2) are illuminated and cleaned as necessary so that the legend is readily visible.

(iv) The employer may use signs required by other statutes, regulations, or ordinances in addition to, or in combination with, signs required by this paragraph (m)(2).

(v) Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (m)(2)(ii) of this section:

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING

* * * * *

Appendix B to § 1910.1025—Employee Standard Summary

* * * * *

xi. SIGNS—PARAGRAPH (m)

The standard requires that the following warning sign be posted in the work areas when the exposure to lead exceeds the PEL:

DANGER
LEAD
MAY DAMAGE FERTILITY OR THE UNBORN CHILD
CAUSES DAMAGE TO THE CENTRAL NERVOUS SYSTEM
DO NOT EAT, DRINK OR SMOKE IN THIS AREA

However, prior to June 1, 2016, employers may use the following legend in lieu of that specified above:

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING

* * * * *

■ 20. Revise § 1910.1026, paragraphs (h)(2)(iv) and (l)(1) to read as follows:

§ 1910.1026 Chromium (VI).

* * * * *

(h) * * *

(2) * * *

(iv) The employer shall ensure that bags or containers of contaminated protective clothing or equipment that are removed from change rooms for laundering, cleaning, maintenance, or disposal are labeled in accordance with the requirements of the Hazard Communication Standard, § 1910.1200.

* * * * *

(l) * * *

(1) *Hazard communication—general* (i) Chemical manufacturers, importers, distributors and employers shall comply with all requirements of the Hazard Communication Standard (HCS) (§ 1910.1200) for chromium (VI).

(ii) In classifying the hazards of chromium (VI) at least the following hazards are to be addressed: Cancer, eye irritation, and skin sensitization.

(iii) Employers shall include chromium (VI) in the hazard communication program established to comply with the HCS (§ 1910.1200). Employers shall ensure that each employee has access to labels on containers of chromium (VI) and to safety data sheets, and is trained in accordance with the requirements of HCS and paragraph (l)(2) of this section.

* * * * *

■ 21. Revise § 1910.1027 paragraphs (k)(7), (m)(1), (m)(2), and (m)(3) to read as follows:

§ 1910.1027 Cadmium.

* * * * *

(k) * * *

(7) Waste, scrap, debris, bags, containers, personal protective equipment, and clothing contaminated with cadmium and consigned for disposal shall be collected and disposed of in sealed impermeable bags or other closed, impermeable containers. These bags and containers shall be labeled in accordance with paragraph (m) of this section.

* * * * *

(m) * * *

(1) *Hazard communication.—general.* (i) Chemical manufacturers, importers, distributors and employers shall comply with all requirements of the Hazard Communication Standard (HCS) (§ 1910.1200) for cadmium.

(ii) In classifying the hazards of cadmium at least the following hazards are to be addressed: Cancer; lung effects; kidney effects; and acute toxicity effects.

(iii) Employers shall include cadmium in the hazard communication program established to comply with the HCS (§ 1910.1200). Employers shall ensure that each employee has access to labels on containers of cadmium and to safety data sheets, and is trained in accordance with the requirements of HCS and paragraph (m)(4) of this section.

(2) *Warning signs.* (i) Warning signs shall be provided and displayed in regulated areas. In addition, warning signs shall be posted at all approaches to regulated areas so that an employee may read the signs and take necessary protective steps before entering the area.

(ii) Warning signs required by paragraph (m)(2)(i) of this section shall bear the following legend:

DANGER
CADMIUM
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS AND KIDNEYS
WEAR RESPIRATORY PROTECTION IN THIS AREA
AUTHORIZED PERSONNEL ONLY

(iii) The employer shall ensure that signs required by this paragraph (m)(2) are illuminated, cleaned, and maintained as necessary so that the legend is readily visible.

(iv) Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (m)(2)(ii) of this section:

DANGER
CADMIUM
CANCER HAZARD
CAN CAUSE LUNG AND KIDNEY DISEASE
AUTHORIZED PERSONNEL ONLY
RESPIRATORS REQUIRED IN THIS AREA

(3) *Warning labels.* (i) Shipping and storage containers containing cadmium or cadmium compounds shall bear appropriate warning labels, as specified in paragraph (m)(1) of this section.

(ii) The warning labels for containers of contaminated protective clothing, equipment, waste, scrap, or debris shall include at least the following information:

DANGER
CONTAINS CADMIUM
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS AND KIDNEYS
AVOID CREATING DUST

(iii) Prior to June 1, 2015, employers may include the following information on shipping and storage containers containing cadmium, cadmium compounds, or cadmium contaminated clothing, equipment, waste, scrap, or debris in lieu of the labeling

requirements specified in paragraphs (m)(1)(i) and (m)(3)(ii) of this section:

DANGER
CONTAINS CADMIUM
CANCER HAZARD
AVOID CREATING DUST
CAN CAUSE LUNG AND KIDNEY DISEASE

(iv) Where feasible, installed cadmium products shall have a visible label or other indication that cadmium is present.

* * * * *

■ 22. Revise § 1910.1028, paragraph (j) heading, and paragraphs (j)(1) and (j)(2) to read as follows:

§ 1910.1028 Benzene.

* * * * *

(j) *Communication of hazards*—(1) *Hazard communication—general.* (i) Chemical manufacturers, importers, distributors and employers shall comply with all requirements of the Hazard Communication Standard (HCS) (§ 1910.1200) for benzene.

(ii) In classifying the hazards of benzene at least the following hazards are to be addressed: Cancer; central nervous system effects; blood effects; aspiration; skin, eye, and respiratory tract irritation; and flammability.

(iii) Employers shall include benzene in the hazard communication program established to comply with the HCS (§ 1910.1200). Employers shall ensure that each employee has access to labels on containers of benzene and to safety data sheets, and is trained in accordance with the requirements of HCS and paragraph (j)(3) of this section.

(2) *Warning signs and labels.* (i)The employer shall post signs at entrances to regulated areas. The signs shall bear the following legend:

DANGER
BENZENE
MAY CAUSE CANCER
HIGHLY FLAMMABLE LIQUID AND VAPOR
DO NOT SMOKE
WEAR RESPIRATORY PROTECTION IN THIS AREA
AUTHORIZED PERSONNEL ONLY

(ii) Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (j)(2)(i) of this section:

DANGER
BENZENE
CANCER HAZARD
FLAMMABLE—NO SMOKING
AUTHORIZED PERSONNEL ONLY
RESPIRATOR REQUIRED

(iii) The employer shall ensure that labels or other appropriate forms of warning are provided for containers of benzene within the workplace. There is no requirement to label pipes. The labels shall comply with the requirements of paragraph (j)(1) of this section and § 1910.1200(f).

(iv) Prior to June 1, 2015, employers shall include the following legend or similar language on the labels or other appropriate forms of warning:

DANGER
CONTAINS BENZENE
CANCER HAZARD

* * * * *

■ 23. Revise § 1910.1029 paragraph (l) heading, and paragraphs (l)(1) through (l)(3) to read as follows:

§ 1910.1029 Coke oven emissions.

* * * * *

(l) *Communication of hazards*—(1) *Hazard communication—general.* The employer shall include coke oven emissions in the program established to comply with the Hazard Communication Standard (HCS) (§ 1910.1200). The employer shall ensure that each employee has access to labels on containers of chemicals and substances associated with coke oven processes and to safety data sheets, and is trained in accordance with the provisions of HCS and paragraph (k) of this section. The employer shall ensure that at least the following hazard is addressed: Cancer.

(2) *Signs.* (i) The employer shall post signs in the regulated area bearing the legend:

DANGER
COKE OVEN EMISSIONS
MAY CAUSE CANCER
DO NOT EAT, DRINK OR SMOKE
WEAR RESPIRATORY PROTECTION IN THIS AREA
AUTHORIZED PERSONNEL ONLY

(ii) In addition, the employer shall post signs in the areas where the permissible exposure limit is exceeded bearing the legend:

WEAR RESPIRATORY PROTECTION IN THIS AREA

(iii) The employer shall ensure that no statement appears on or near any sign required by this paragraph (l) which contradicts or detracts from the effects of the required sign.

(iv) The employer shall ensure that signs required by this paragraph (l)(2) are illuminated and cleaned as necessary so that the legend is readily visible.

(v) Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (l)(2)(i) of this section:

DANGER
CANCER HAZARD
AUTHORIZED PERSONNEL ONLY
NO SMOKING OR EATING

(vi) Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (l)(2)(ii) of this section:

DANGER
RESPIRATOR REQUIRED

(3) *Labels.* (i) The employer shall ensure that labels of containers of contaminated protective clothing and equipment include the following information:

CONTAMINATED WITH COKE EMISSIONS
MAY CAUSE CANCER
DO NOT REMOVE DUST BY BLOWING OR SHAKING

(ii) Prior to June 1, 2015, employers may include the following information on contaminated protective clothing and equipment in lieu of the labeling requirements in paragraph (l)(3)(i) of this section:

CAUTION
CLOTHING CONTAMINATED WITH COKE EMISSIONS
DO NOT REMOVE DUST BY BLOWING OR SHAKING

* * * * *

■ 24. Revise § 1910.1043 paragraph (j) to read as follows:

§ 1910.1043 Cotton dust.

* * * * *

(j) *Signs.* (1) The employer shall post the following warning sign in each work area where the permissible exposure limit for cotton dust is exceeded:

DANGER
COTTON DUST
CAUSES DAMAGE TO LUNGS
(BYSSINOSIS)
WEAR RESPIRATORY PROTECTION IN THIS AREA

(2) Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (j)(1) of this section:

WARNING
COTTON DUST WORK AREA
MAY CAUSE ACUTE OR DELAYED
LUNG INJURY
(BYSSINOSIS)
RESPIRATORS
REQUIRED IN THIS AREA

* * * * *

■ 25. Revise § 1910.1044 paragraphs (j)(2)(v), (k)(1)(iii)(*b*), and paragraph (o) to read as follows:

§ 1910.1044 1,2-dibromo-3-chloropropane.

* * * * *

(j) * * *

(2) * * *

(v) Containers of DBCP-contaminated protective devices or work clothing which are to be taken out of change rooms or the workplace for cleaning, maintenance or disposal shall bear

labels with the following information: CONTAMINATED WITH 1,2–Dibromo-3-chloropropane (DBCP), MAY CAUSE CANCER.

* * * * *

(k) * * *

(1) * * *

(iii) * * *

(*b*) Portable vacuum units used to collect DBCP may not be used for other cleaning purposes and shall be labeled as prescribed by paragraph (j)(2)(v) of this section.

* * * * *

(o) *Communication of hazards*—(1) *Hazard communication—general.* (i) Chemical manufacturers, importers, distributors and employers shall comply with all requirements of the Hazard Communication Standard (HCS) (§ 1910.1200) for DBCP.

(ii) In classifying the hazards of DBCP at least the following hazards are to be addressed: Cancer; reproductive effects; liver effects; kidney effects; central nervous system effects; skin, eye and respiratory tract irritation; and acute toxicity effects.

(iii) Employers shall include DBCP in the hazard communication program established to comply with the HCS (§ 1910.1200). Employers shall ensure that each employee has access to labels on containers of DBCP and to safety data sheets, and is trained in accordance with the requirements of HCS and paragraph (n) of this section.

(iv) The employer shall ensure that no statement appears on or near any sign or label required by this paragraph (o) which contradicts or detracts from the meaning of the required sign or label.

(2) *Signs.* (i) The employer shall post signs to clearly indicate all regulated areas. These signs shall bear the legend:

DANGER
1,2-Dibromo-3-chloropropane
MAY CAUSE CANCER
WEAR RESPIRATORY PROTECTION IN THIS AREA
AUTHORIZED PERSONNEL ONLY

(ii) Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (o)(2) of this section:

DANGER
1,2-Dibromo-3-chloropropane
(Insert appropriate trade or common names)
CANCER HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATOR REQUIRED

(3) *Labels.* (i) Where DBCP or products containing DBCP are sold, distributed or otherwise leave the employer's workplace bearing appropriate labels required by EPA under the regulations in 40 CFR Part 162, the labels required by this paragraph (o)(3) need not be affixed.

(ii) The employer shall ensure that the precautionary labels required by this paragraph (o)(3) are readily visible and legible.

(iii) Prior to June 1, 2015, employers may include the following information on containers of DBCP or products containing DBCP, DBCP-contaminated protective devices or work clothing or DBCP-contaminated portable vacuums in lieu of the labeling requirements in paragraphs (j)(2)(v), (k)(l)(iii)(b) and (o)(1)(i) of this section:

DANGER
1,2-Dibromo-3-chloropropane
CANCER HAZARD

* * * * *

■ 26. Revise § 1910.1045 paragraph (p) to read as follows:

§ 1910.1045 Acrylonitrile.

* * * * *

(p) *Communication of hazards*—(1) *Hazard communication—general.* (i) Chemical manufacturers, importers, distributors and employers shall comply with all requirements of the Hazard Communication Standard (HCS) (§ 1910.1200) for AN and AN-based materials not exempted under paragraph (a)(2) of this section.

(ii) In classifying the hazards of AN and AN-based materials at least the following hazards are to be addressed: Cancer; central nervous system effects; liver effects; skin sensitization; skin, respiratory, and eye irritation; acute toxicity effects; and flammability.

(iii) Employers shall include AN and AN-based materials in the hazard communication program established to comply with the HCS (§ 1910.1200). Employers shall ensure that each employee has access to labels on containers of AN and AN-based materials and to safety data sheets, and is trained in accordance with the requirements of HCS and paragraph (o) of this section.

(iv) The employer shall ensure that no statement appears on or near any sign or label required by this paragraph (p) that contradicts or detracts from the required sign or label.

(2) *Signs.* (i) The employer shall post signs to clearly indicate all workplaces where AN concentrations exceed the permissible exposure limits. The signs shall bear the following legend:

DANGER
ACRYLONITRILE (AN)
MAY CAUSE CANCER
RESPIRATORY PROTECTION MAY BE REQURED IN THIS AREA
AUTHORIZED PERSONNEL ONLY

(ii) The employer shall ensure that signs required by this paragraph (p)(2) are illuminated and cleaned as necessary so that the legend is readily visible.

(iii) Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (p)(2)(i) of this section:

DANGER
ACRYLONITRILE (AN)
CANCER HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS MAY BE REQUIRED

(3) *Labels.* (i) The employer shall ensure that precautionary labels are in compliance with paragraph (p)(1)(i) of this section and are affixed to all containers of liquid AN and AN-based materials not exempted under paragraph (a)(2) of this section. The employer shall ensure that the labels remain affixed when the materials are sold, distributed, or otherwise leave the employer's workplace.

(ii) Prior to June 1, 2015, employers may include the following information on precautionary labels required by this paragraph (p)(3) in lieu of the labeling requirements in paragraph (p)(1) of this section:

DANGER
CONTAINS ACRYLONITRILE (AN)
CANCER HAZARD

(iii) The employer shall ensure that the precautionary labels required by this paragraph (p)(3) are readily visible and legible.

* * * * *

■ 27. Revise § 1910.1047 paragraph (j) heading, and paragraphs (j)(1) and (j)(2) to read as follows:

§ 1910.1047 Ethylene oxide.

* * * * *

(j) *Communication of hazards*—(1) *Hazard communication—general.* (i) Chemical manufacturers, importers, distributors and employers shall comply with all requirements of the Hazard Communication Standard (HCS) (§ 1910.1200) for EtO.

(ii) In classifying the hazards of EtO at least the following hazards are to be addressed: Cancer; reproductive effects; mutagenicity; central nervous system; skin sensitization; skin, eye and respiratory tract irritation; acute toxicity effects; and flammability.

(iii) Employers shall include EtO in the hazard communication program established to comply with the HCS (§ 1910.1200). Employers shall ensure that each employee has access to labels on containers of EtO and to safety data sheets, and is trained in accordance with the requirements of HCS and paragraph (j)(3) of this section.

(2) *Signs and labels*—(i) *Signs.* (A) The employer shall post and maintain legible signs demarcating regulated areas and entrances or access ways to regulated areas that bear the following legend:

DANGER
ETHYLENE OXIDE
MAY CAUSE CANCER
MAY DAMAGE FERTILITY OR THE UNBORN CHILD
RESPIRATORY PROTECTION AND PROTECTIVE CLOTHING MAY BE REQUIRED IN THIS AREA
AUTHORIZED PERSONNEL ONLY

(B) Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (j)(2)(i)(A) of this section:

DANGER
ETHYLENE OXIDE
CANCER HAZARD AND REPRODUCTIVE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING MAY BE REQUIRED TO BE WORN IN THIS AREA

(ii) *Labels.* (A) The employer shall ensure that labels are affixed to all containers of EtO whose contents are capable of causing employee exposure at or above the action level or whose contents may reasonably be foreseen to cause employee exposure above the excursion limit, and that the labels remain affixed when the containers of EtO leave the workplace. For the purposes of this paragraph (j)(2)(ii), reaction vessels, storage tanks, and pipes or piping systems are not considered to be containers.

(B) Prior to June 1, 2015, employers may include the following information on containers of EtO in lieu of the labeling requirements in paragraph (j)(1)(i) of this section:

(*1*) DANGER
CONTAINS ETHYLENE OXIDE
CANCER HAZARD AND REPRODUCTIVE HAZARD;
(*2*) A warning statement against breathing airborne concentrations of EtO.

(C) The labeling requirements under this section do not apply where EtO is used as a pesticide, as such term is defined in the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136 et seq.), when it is labeled pursuant to that Act and regulations issued under that Act by the Environmental Protection Agency.

* * * * *

■ 28. Revise § 1910.1048 paragraphs (e)(1), (h)(2)(ii), (j)(4) and (m) to read as follows:

§ 1910.1048 Formaldehyde.

* * * * *

(e) * * *

(1) *Signs.* (i) The employer shall establish regulated areas where the concentration of airborne formaldehyde exceeds either the TWA or the STEL and post all entrances and access ways with signs bearing the following legend:

DANGER
FORMALDEHYDE
MAY CAUSE CANCER
CAUSES SKIN, EYE, AND RESPIRATORY IRRITATION
AUTHORIZED PERSONNEL ONLY

(ii) Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (e)(1)(i) of this section:

DANGER
FORMALDEHYDE
IRRITANT AND POTENTIAL CANCER HAZARD
AUTHORIZED PERSONNEL ONLY

* * * * *

(h) * * *

(2) * * *

(ii) When formaldehyde-contaminated clothing and equipment is ventilated, the employer shall establish storage areas so that employee exposure is minimized.

(A) *Signs.* Storage areas for contaminated clothing and equipment shall have signs bearing the following legend:

DANGER
FORMALDEHYDE-CONTAMINATED [CLOTHING] EQUIPMENT
MAY CAUSE CANCER
CAUSES SKIN, EYE AND RESPIRATORY IRRITATION
DO NOT BREATHE VAPOR
DO NOT GET ON SKIN

(B) *Labels.* The employer shall ensure containers for contaminated clothing and equipment are labeled consistent with the Hazard Communication Standard, § 1910.1200, and shall, as a minimum, include the following:

DANGER
FORMALDEHYDE-CONTAMINATED [CLOTHING] EQUIPMENT
MAY CAUSE CANCER
CAUSES SKIN, EYE, AND RESPIRATORY IRRITATION
DO NOT BREATHE VAPOR
DO NOT GET ON SKIN

(C) Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (h)(2)(ii)(A) of this section:

DANGER
FORMALDEHYDE-CONTAMINATED [CLOTHING] EQUIPMENT
AVOID INHALATION AND SKIN CONTACT

(D) Prior to June 1, 2015, employers may include the following information on containers of protective clothing and equipment in lieu of the labeling requirements in paragraphs (h)(2)(ii)(B) of this section:

DANGER
FORMALDEHYDE-CONTAMINATED [CLOTHING] EQUIPMENT
AVOID INHALATION AND SKIN CONTACT

* * * * *

(j) * * *

(4) Formaldehyde-contaminated waste and debris resulting from leaks or spills shall be placed for disposal in sealed containers bearing a label warning of formaldehyde's presence and of the hazards associated with formaldehyde. The employer shall ensure that the labels are in accordance with paragraph (m) of this section.

* * * * *

(m) *Communication of hazards.* (1) *Hazard communication—General.* (i) Chemical manufacturers, importers, distributors and employers shall comply with all requirements of the Hazard Communication Standard (HCS) (§ 1910.1200) for formaldehyde.

(ii) In classifying the hazards of formaldehyde at least the following hazards are to be addressed: Cancer; skin and respiratory sensitization; eye, skin and respiratory tract irritation; acute toxicity effects; and flammability.

(iii) Employers shall include formaldehyde in the hazard communication program established to comply with the HCS (§ 1910.1200). Employers shall ensure that each employee has access to labels on containers of formaldehyde and to safety data sheets, and is trained in accordance with the requirements of HCS and paragraph (n) of this section.

(iv) Paragraphs (m)(1)(i), (m)(1)(ii), and (m)(1)(iii) of this section apply to chemicals associated with formaldehyde gas, all mixtures or solutions composed of greater than 0.1 percent formaldehyde, and materials capable of releasing formaldehyde into the air at concentrations reaching or exceeding 0.1 ppm.

(v) In making the determinations of anticipated levels of formaldehyde release, the employer may rely on objective data indicating the extent of potential formaldehyde release under reasonably foreseeable conditions of use.

(2)(i) In addition to the requirements in paragraphs (m)(1) through (m)(1)(iv) of this section, for materials listed in paragraph (m)(1)(iv) capable of releasing formaldehyde at levels above 0.5 ppm, labels shall appropriately address all hazards as defined in paragraph (d) of § 1910.1200 and Appendices A and B to § 1910.1200, including cancer and respiratory sensitization, and shall

contain the hazard statement ''May Cause Cancer.''

(ii) As a minimum, for all materials listed in paragraph (m)(1)(i) and (iv) of this section capable of releasing formaldehyde at levels of 0.1 ppm to 0.5 ppm, labels shall identify that the product contains formaldehyde; list the name and address of the responsible party; and state that physical and health hazard information is readily available from the employer and from safety data sheets.

(iii) Prior to June 1, 2015, employers may include the phrase ''Potential Cancer Hazard'' in lieu of ''May Cause Cancer'' as specified in paragraph (m)(2)(i) of this section.

* * * * *

■ 29. Amend § 1910.1050 as follows:
■ A. Revise the heading of paragraph (k);
■ B. Revise paragraphs (k)(1) and (k)(2);
■ C. Redesignate paragraphs (k)(3) and (k)(4) as (k)(4) and (k)(5);
■ D. Add new paragraph (k)(3).

The revisions and additions read as follows:

§ 1910.1050 Methylenedianiline.

* * * * *

(k) *Communication of hazards*—(1) *Hazard communication—general.*

(i) Chemical manufacturers, importers, distributors and employers shall comply with all requirements of the Hazard Communication Standard (HCS) (§ 1910.1200) for MDA.

(ii) In classifying the hazards of MDA at least the following hazards are to be addressed: Cancer; liver effects; and skin sensitization.

(iii) Employers shall include MDA in the hazard communication program established to comply with the HCS (§ 1910.1200). Employers shall ensure that each employee has access to labels on containers of MDA and to safety data sheets, and is trained in accordance with the requirements of HCS and paragraph (k)(4) of this section.

(2) *Signs and labels*—(i) *Signs.* (A) The employer shall post and maintain legible signs demarcating regulated areas and entrances or access ways to regulated areas that bear the following legend:

DANGER
MDA
MAY CAUSE CANCER
CAUSES DAMAGE TO THE LIVER
RESPIRATORY PROTECTION AND PROTECTIVE CLOTHING MAY BE REQUIRED IN THIS AREA
AUTHORIZED PERSONNEL ONLY

(B) Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (k)(2)(i)(A) of this section:

DANGER
MDA
MAY CAUSE CANCER
LIVER TOXIN
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING MAY BE REQUIRED TO BE WORN IN THIS AREA

(ii) *Labels.* Prior to June 1, 2015, employers may include the following information workplace labels in lieu of the labeling requirements in paragraph (k)(1) of this section:

(A) For pure MDA:

DANGER
CONTAINS MDA
MAY CAUSE CANCER
LIVER TOXIN

(B) For mixtures containing MDA:

DANGER
CONTAINS MDA
CONTAINS MATERIALS WHICH MAY CAUSE CANCER
LIVER TOXIN

(3) *Safety data sheets (SDS).* In meeting the obligation to provide safety data sheets, employers shall make appropriate use of the information found in Appendices A and B to § 1910.1050.

* * * * *

■ 30. Revise § 1910.1051 paragraph (l)(1) to read as follows:

§ 1910.1051 1,3-Butadiene.

* * * * *

(l) * * *

(1) *Hazard communication—general.* (i) Chemical manufacturers, importers, distributors and employers shall comply with all requirements of the Hazard Communication Standard (HCS) (§ 1910.1200) for BD.

(ii) In classifying the hazards of BD at least the following hazards are to be addressed: Cancer; eye and respiratory tract irritation; center nervous system effects; and flammability.

(iii) Employers shall include BD in the hazard communication program established to comply with the HCS (§ 1910.1200). Employers shall ensure that each employee has access to labels on containers of BD and to safety data sheets, and is trained in accordance with the requirements of HCS and paragraph (l)(2) of this section.

* * * * *

■ 31. Amend § 1910.1052 as follows:
■ A. Revise paragraph (k);
■ B. Remove the phrase ''material safety data sheets (MSDS)'' and add in its place the phrase ''safety data sheets (SDS)'' where it appears in Appendix A, Paragraph X.E.

The revisions read as follows:

§ 1910.1052 Methylene chloride.

* * * * *

(k) *Hazard communication.*—(1) *Hazard communication—general.* (i) Chemical manufacturers, importers, distributors and employers shall comply with all requirements of the Hazard Communication Standard (HCS) (§ 1910.1200) for MC.

(ii) In classifying the hazards of MC at least the following hazards are to be addressed: Cancer, cardiac effects (including elevation of carboxyhemoglobin), central nervous system effects, liver effects, and skin and eye irritation.

(iii) Employers shall include MC in the hazard communication program established to comply with the HCS (§ 1910.1200). Employers shall ensure that each employee has access to labels on containers of MC and to safety data sheets, and is trained in accordance with the requirements of HCS and paragraph (l) of this section.

(2) [Reserved]

* * * * *

■ 32. Amend § 1910.1200 as follows:
■ A. Remove the word ''material'' before the word ''safety'' in the phrase ''material safety data sheet'' or ''material safety data sheets'' wherever they appear in paragraphs (b)(3)(ii), (b)(4)(ii), (e)(1) introductory text, (e)(2)(i), (g)(4), (g)(6)(i) through (iv), (g)(7)(i) through (vii), (g)(9), (g)(11), (h)(1), (h)(2)(iii), and (i)(1)(ii);
■ B. Remove the word ''Material'' before the word ''safety'' in the phrase ''Material safety data sheets'' wherever they appear in paragraphs (g)(10) and (g)(11). In paragraphs (g)(10) and (g)(11) in the first sentence, capitalize the first letter of the word ''safety''.
■ C. Remove the following definitions in paragraph (c) *Combustible liquid, Compressed gas, Explosive, Flammable, Flashpoint, Hazard warning, Identity, Material safety data sheet (MSDS), Organic peroxide, Oxidizer, Pyrophoric, Unstable (reactive),* and *Water-reactive;*
■ D. Revise the following definitions in paragraph (c) *Chemical, Chemical name, Health hazard, Label, Mixture, Physical hazard,* and *Trade secret;*
■ E. Redesignate the definition of the term *Hazardous chemical* in alphabetical order in paragraph (c) and revise the definition;
■ F. Add the following definitions in alphabetical order in paragraph (c) *Classification, Hazard category, Hazard class, Hazard not otherwise classified, Hazard statement, Label elements, Pictogram, Precautionary statement, Product identifier, Pyrophoric gas, Safety Data Sheet (SDS), Signal word, Simple asphyxiant,* and *Substance;*
■ G. Remove the following phrases: ''in'' before the phrase ''in their work area(s)''

in paragraph (g)(10); ''specific chemical identity'' in paragraph (i)(10)(ii); and ''or percentage of mixture'' in paragraph (i)(13);

■ H. Revise paragraphs (a), (b)(1), (b)(3)(iv), (b)(5)(iv), (b)(6)(ii), paragraph (d) (heading), paragraphs (d)(1) through (d)(3), (e)(1)(i), (f), paragraph (g) (heading), paragraphs (g)(1), (g)(2), (g)(3), (g)(5), (g)(8), (g)(11), (h)(1), (h)(3)(ii), (h)(3)(iv), (i)(1) introductory text, (i)(1)(iii) and (iv), (i)(2), (i)(3) introductory text, (i)(3)(iii), (i)(7) introductory text, (i)(7)(iii), (i)(7)(v), (i)(9)(i), (i)(10), (i)(11), and (j).

■ I. Remove Appendices A, B, and E to § 1910.1200.

■ J. Redesignate Appendix D to § 1910.1200 as Appendix E to § 1910.1200.

■ K. Add new Appendices A, B, C, D and F to § 1910.1200.

The revisions and additions read as follows:

§ 1910.1200 Hazard communication.

(a) *Purpose.* (1) The purpose of this section is to ensure that the hazards of all chemicals produced or imported are classified, and that information concerning the classified hazards is transmitted to employers and employees. The requirements of this section are intended to be consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS), Revision 3. The transmittal of information is to be accomplished by means of comprehensive hazard communication programs, which are to include container labeling and other forms of warning, safety data sheets and employee training.

(2) This occupational safety and health standard is intended to address comprehensively the issue of classifying the potential hazards of chemicals, and communicating information concerning hazards and appropriate protective measures to employees, and to preempt any legislative or regulatory enactments of a state, or political subdivision of a state, pertaining to this subject. Classifying the potential hazards of chemicals and communicating information concerning hazards and appropriate protective measures to employees, may include, for example, but is not limited to, provisions for: developing and maintaining a written hazard communication program for the workplace, including lists of hazardous chemicals present; labeling of containers of chemicals in the workplace, as well as of containers of chemicals being shipped to other workplaces; preparation and distribution of safety data sheets to employees and downstream employers; and development and implementation of employee training programs regarding hazards of chemicals and protective measures. Under section 18 of the Act, no state or political subdivision of a state may adopt or enforce any requirement relating to the issue addressed by this Federal standard, except pursuant to a Federally-approved state plan.

(b) * * *

(1) This section requires chemical manufacturers or importers to classify the hazards of chemicals which they produce or import, and all employers to provide information to their employees about the hazardous chemicals to which they are exposed, by means of a hazard communication program, labels and other forms of warning, safety data sheets, and information and training. In addition, this section requires distributors to transmit the required information to employers. (Employers who do not produce or import chemicals need only focus on those parts of this rule that deal with establishing a workplace program and communicating information to their workers.)

* * * * *

(3) * * *

(iv) Laboratory employers that ship hazardous chemicals are considered to be either a chemical manufacturer or a distributor under this rule, and thus must ensure that any containers of hazardous chemicals leaving the laboratory are labeled in accordance with paragraph (f) of this section, and that a safety data sheet is provided to distributors and other employers in accordance with paragraphs (g)(6) and (g)(7) of this section.

* * * * *

(5) * * *

(iv) Any distilled spirits (beverage alcohols), wine, or malt beverage intended for nonindustrial use, as such terms are defined in the Federal Alcohol Administration Act (27 U.S.C. 201 et seq.) and regulations issued under that Act, when subject to the labeling requirements of that Act and labeling regulations issued under that Act by the Bureau of Alcohol, Tobacco, Firearms and Explosives;

* * * * *

(6) * * *

(ii) Any hazardous substance as such term is defined by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. 9601 et seq.) when the hazardous substance is the focus of remedial or removal action being conducted under CERCLA in accordance with Environmental Protection Agency regulations.

* * * * *

(c) * * *

Chemical means any substance, or mixture of substances.

* * * * *

Chemical name means the scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS) rules of nomenclature, or a name that will clearly identify the chemical for the purpose of conducting a hazard classification.

Classification means to identify the relevant data regarding the hazards of a chemical; review those data to ascertain the hazards associated with the chemical; and decide whether the chemical will be classified as hazardous according to the definition of hazardous chemical in this section. In addition, classification for health and physical hazards includes the determination of the degree of hazard, where appropriate, by comparing the data with the criteria for health and physical hazards.

* * * * *

Hazard category means the division of criteria within each hazard class, e.g., oral acute toxicity and flammable liquids include four hazard categories. These categories compare hazard severity within a hazard class and should not be taken as a comparison of hazard categories more generally.

Hazard class means the nature of the physical or health hazards, e.g., flammable solid, carcinogen, oral acute toxicity.

Hazard not otherwise classified (HNOC) means an adverse physical or health effect identified through evaluation of scientific evidence during the classification process that does not meet the specified criteria for the physical and health hazard classes addressed in this section. This does not extend coverage to adverse physical and health effects for which there is a hazard class addressed in this section, but the effect either falls below the cut-off value/concentration limit of the hazard class or is under a GHS hazard category that has not been adopted by OSHA (e.g., acute toxicity Category 5).

Hazard statement means a statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.

Hazardous chemical means any chemical which is classified as a physical hazard or a health hazard, a

simple asphyxiant, combustible dust, pyrophoric gas, or hazard not otherwise classified.

Health hazard means a chemical which is classified as posing one of the following hazardous effects: acute toxicity (any route of exposure); skin corrosion or irritation; serious eye damage or eye irritation; respiratory or skin sensitization; germ cell mutagenicity; carcinogenicity; reproductive toxicity; specific target organ toxicity (single or repeated exposure); or aspiration hazard. The criteria for determining whether a chemical is classified as a health hazard are detailed in Appendix A to § 1910.1200—Health Hazard Criteria.

* * * * *

Label means an appropriate group of written, printed or graphic information elements concerning a hazardous chemical that is affixed to, printed on, or attached to the immediate container of a hazardous chemical, or to the outside packaging.

Label elements means the specified pictogram, hazard statement, signal word and precautionary statement for each hazard class and category.

Mixture means a combination or a solution composed of two or more substances in which they do not react.

Physical hazard means a chemical that is classified as posing one of the following hazardous effects: explosive; flammable (gases, aerosols, liquids, or solids); oxidizer (liquid, solid or gas); self-reactive; pyrophoric (liquid or solid); self-heating; organic peroxide; corrosive to metal; gas under pressure; or in contact with water emits flammable gas. *See* Appendix B to § 1910.1200—Physical Hazard Criteria.

Pictogram means a composition that may include a symbol plus other graphic elements, such as a border, background pattern, or color, that is intended to convey specific information about the hazards of a chemical. Eight pictograms are designated under this standard for application to a hazard category.

Precautionary statement means a phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical, or improper storage or handling.

Product identifier means the name or number used for a hazardous chemical on a label or in the SDS. It provides a unique means by which the user can identify the chemical. The product identifier used shall permit cross-references to be made among the list of hazardous chemicals required in the written hazard communication program, the label and the SDS.

* * * * *

Pyrophoric gas means a chemical in a gaseous state that will ignite spontaneously in air at a temperature of 130 degrees F (54.4 degrees C) or below.

* * * * *

Safety data sheet (SDS) means written or printed material concerning a hazardous chemical that is prepared in accordance with paragraph (g) of this section.

Signal word means a word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The signal words used in this section are ''danger'' and ''warning.'' ''Danger'' is used for the more severe hazards, while ''warning'' is used for the less severe.

Simple asphyxiant means a substance or mixture that displaces oxygen in the ambient atmosphere, and can thus cause oxygen deprivation in those who are exposed, leading to unconsciousness and death.

* * * * *

Substance means chemical elements and their compounds in the natural state or obtained by any production process, including any additive necessary to preserve the stability of the product and any impurities deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.

Trade secret means any confidential formula, pattern, process, device, information or compilation of information that is used in an employer's business, and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it. Appendix E to § 1910.1200—Definition of Trade Secret, sets out the criteria to be used in evaluating trade secrets.

* * * * *

(d) *Hazard classification.* (1) Chemical manufacturers and importers shall evaluate chemicals produced in their workplaces or imported by them to classify the chemicals in accordance with this section. For each chemical, the chemical manufacturer or importer shall determine the hazard classes, and, where appropriate, the category of each class that apply to the chemical being classified. Employers are not required to classify chemicals unless they choose not to rely on the classification performed by the chemical manufacturer or importer for the chemical to satisfy this requirement.

(2) Chemical manufacturers, importers or employers classifying chemicals shall identify and consider the full range of available scientific literature and other evidence concerning the potential hazards. There is no requirement to test the chemical to determine how to classify its hazards. Appendix A to § 1910.1200 shall be consulted for classification of health hazards, and Appendix B to § 1910.1200 shall be consulted for the classification of physical hazards.

(3) *Mixtures.* (i) Chemical manufacturers, importers, or employers evaluating chemicals shall follow the procedures described in Appendices A and B to § 1910.1200 to classify the hazards of the chemicals, including determinations regarding when mixtures of the classified chemicals are covered by this section.

(ii) When classifying mixtures they produce or import, chemical manufacturers and importers of mixtures may rely on the information provided on the current safety data sheets of the individual ingredients, except where the chemical manufacturer or importer knows, or in the exercise of reasonable diligence should know, that the safety data sheet misstates or omits information required by this section.

* * * * *

(e) * * *

(1) * * *

(i) A list of the hazardous chemicals known to be present using a product identifier that is referenced on the appropriate safety data sheet (the list may be compiled for the workplace as a whole or for individual work areas); and,

* * * * *

(f) *Labels and other forms of warning*—(1) *Labels on shipped containers.* The chemical manufacturer, importer, or distributor shall ensure that each container of hazardous chemicals leaving the workplace is labeled, tagged, or marked. Hazards not otherwise classified do not have to be addressed on the container. Where the chemical manufacturer or importer is required to label, tag or mark the following information shall be provided:

(i) Product identifier;

(ii) Signal word;

(iii) Hazard statement(s);

(iv) Pictogram(s);

(v) Precautionary statement(s); and,

(vi) Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party.

(2) The chemical manufacturer, importer, or distributor shall ensure that the information provided under paragraphs (f)(1)(i) through (v) of this section is in accordance with Appendix

C to § 1910.1200, for each hazard class and associated hazard category for the hazardous chemical, prominently displayed, and in English (other languages may also be included if appropriate).

(3) The chemical manufacturer, importer, or distributor shall ensure that the information provided under paragraphs (f)(1)(ii) through (iv) of this section is located together on the label, tag, or mark.

(4*) Solid materials.* (i) For solid metal (such as a steel beam or a metal casting), solid wood, or plastic items that are not exempted as articles due to their downstream use, or shipments of whole grain, the required label may be transmitted to the customer at the time of the initial shipment, and need not be included with subsequent shipments to the same employer unless the information on the label changes;

(ii) The label may be transmitted with the initial shipment itself, or with the safety data sheet that is to be provided prior to or at the time of the first shipment; and,

(iii) This exception to requiring labels on every container of hazardous chemicals is only for the solid material itself, and does not apply to hazardous chemicals used in conjunction with, or known to be present with, the material and to which employees handling the items in transit may be exposed (for example, cutting fluids or pesticides in grains).

(5) Chemical manufacturers, importers, or distributors shall ensure that each container of hazardous chemicals leaving the workplace is labeled, tagged, or marked in accordance with this section in a manner which does not conflict with the requirements of the Hazardous Materials Transportation Act (49 U.S.C. 1801 *et seq.*) and regulations issued under that Act by the Department of Transportation.

(6) Workplace labeling. Except as provided in paragraphs (f)(7) and (f)(8) of this section, the employer shall ensure that each container of hazardous chemicals in the workplace is labeled, tagged or marked with either:

(i) The information specified under paragraphs (f)(1)(i) through (v) of this section for labels on shipped containers; or,

(ii) Product identifier and words, pictures, symbols, or combination thereof, which provide at least general information regarding the hazards of the chemicals, and which, in conjunction with the other information immediately available to employees under the hazard communication program, will provide employees with the specific information regarding the physical and health hazards of the hazardous chemical.

(7) The employer may use signs, placards, process sheets, batch tickets, operating procedures, or other such written materials in lieu of affixing labels to individual stationary process containers, as long as the alternative method identifies the containers to which it is applicable and conveys the information required by paragraph (f)(6) of this section to be on a label. The employer shall ensure the written materials are readily accessible to the employees in their work area throughout each work shift.

(8) The employer is not required to label portable containers into which hazardous chemicals are transferred from labeled containers, and which are intended only for the immediate use of the employee who performs the transfer. For purposes of this section, drugs which are dispensed by a pharmacy to a health care provider for direct administration to a patient are exempted from labeling.

(9) The employer shall not remove or deface existing labels on incoming containers of hazardous chemicals, unless the container is immediately marked with the required information.

(10) The employer shall ensure that workplace labels or other forms of warning are legible, in English, and prominently displayed on the container, or readily available in the work area throughout each work shift. Employers having employees who speak other languages may add the information in their language to the material presented, as long as the information is presented in English as well.

(11) Chemical manufacturers, importers, distributors, or employers who become newly aware of any significant information regarding the hazards of a chemical shall revise the labels for the chemical within six months of becoming aware of the new information, and shall ensure that labels on containers of hazardous chemicals shipped after that time contain the new information. If the chemical is not currently produced or imported, the chemical manufacturer, importer, distributor, or employer shall add the information to the label before the chemical is shipped or introduced into the workplace again.

(g) *Safety data sheets.* (1) Chemical manufacturers and importers shall obtain or develop a safety data sheet for each hazardous chemical they produce or import. Employers shall have a safety data sheet in the workplace for each hazardous chemical which they use.

(2) The chemical manufacturer or importer preparing the safety data sheet shall ensure that it is in English (although the employer may maintain copies in other languages as well), and includes at least the following section numbers and headings, and associated information under each heading, in the order listed (*See* Appendix D to § 1910.1200—Safety Data Sheets, for the specific content of each section of the safety data sheet):

(i) Section 1, Identification;

(ii) Section 2, Hazard(s) identification;

(iii) Section 3, Composition/information on ingredients;

(iv) Section 4, First-aid measures;

(v) Section 5, Fire-fighting measures;

(vi) Section 6, Accidental release measures;

(vii) Section 7, Handling and storage;

(viii) Section 8, Exposure controls/personal protection;

(ix) Section 9, Physical and chemical properties;

(x) Section 10, Stability and reactivity;

(xi) Section 11, Toxicological information;

(xii) Section 12, Ecological information;

(xiii) Section 13, Disposal considerations;

(xiv) Section 14, Transport information;

(xv) Section 15, Regulatory information; and

(xvi) Section 16, Other information, including date of preparation or last revision.

Note 1 to paragraph (g)(2): To be consistent with the GHS, an SDS must also include the headings in paragraphs (g)(2)(xii) through (g)(2)(xv) in order.

Note 2 to paragraph (g)(2): OSHA will not be enforcing information requirements in sections 12 through 15, as these areas are not under its jurisdiction.

(3) If no relevant information is found for any sub-heading within a section on the safety data sheet, the chemical manufacturer, importer or employer preparing the safety data sheet shall mark it to indicate that no applicable information was found.

* * * * *

(5) The chemical manufacturer, importer or employer preparing the safety data sheet shall ensure that the information provided accurately reflects the scientific evidence used in making the hazard classification. If the chemical manufacturer, importer or employer preparing the safety data sheet becomes newly aware of any significant information regarding the hazards of a chemical, or ways to protect against the hazards, this new information shall be added to the safety data sheet within three months. If the chemical is not

currently being produced or imported, the chemical manufacturer or importer shall add the information to the safety data sheet before the chemical is introduced into the workplace again.

* * * * *

(8) The employer shall maintain in the workplace copies of the required safety data sheets for each hazardous chemical, and shall ensure that they are readily accessible during each work shift to employees when they are in their work area(s). (Electronic access and other alternatives to maintaining paper copies of the safety data sheets are permitted as long as no barriers to immediate employee access in each workplace are created by such options.)

* * * * *

(11) Safety data sheets shall also be made readily available, upon request, to designated representatives, the Assistant Secretary, and the Director, in accordance with the requirements of § 1910.1020(e).

(h) * * *

(1) Employers shall provide employees with effective information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new chemical hazard the employees have not previously been trained about is introduced into their work area. Information and training may be designed to cover categories of hazards (e.g., flammability, carcinogenicity) or specific chemicals. Chemical-specific information must always be available through labels and safety data sheets.

* * * * *

(3) * * *

(ii) The physical, health, simple asphyxiation, combustible dust, and pyrophoric gas hazards, as well as hazards not otherwise classified, of the chemicals in the work area;

* * * * *

(iv) The details of the hazard communication program developed by the employer, including an explanation of the labels received on shipped containers and the workplace labeling system used by their employer; the safety data sheet, including the order of information and how employees can obtain and use the appropriate hazard information.

(i) * * *

(1) The chemical manufacturer, importer, or employer may withhold the specific chemical identity, including the chemical name, other specific identification of a hazardous chemical, or the exact percentage (concentration) of the substance in a mixture, from the safety data sheet, provided that:

* * * * *

(iii) The safety data sheet indicates that the specific chemical identity and/or percentage of composition is being withheld as a trade secret; and,

(iv) The specific chemical identity and percentage is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of this paragraph (i).

(2) Where a treating physician or nurse determines that a medical emergency exists and the specific chemical identity and/or specific percentage of composition of a hazardous chemical is necessary for emergency or first-aid treatment, the chemical manufacturer, importer, or employer shall immediately disclose the specific chemical identity or percentage composition of a trade secret chemical to that treating physician or nurse, regardless of the existence of a written statement of need or a confidentiality agreement. The chemical manufacturer, importer, or employer may require a written statement of need and confidentiality agreement, in accordance with the provisions of paragraphs (i)(3) and (4) of this section, as soon as circumstances permit.

(3) In non-emergency situations, a chemical manufacturer, importer, or employer shall, upon request, disclose a specific chemical identity or percentage composition, otherwise permitted to be withheld under paragraph (i)(1) of this section, to a health professional (i.e. physician, industrial hygienist, toxicologist, epidemiologist, or occupational health nurse) providing medical or other occupational health services to exposed employee(s), and to employees or designated representatives, if:

* * * * *

(iii) The request explains in detail why the disclosure of the specific chemical identity or percentage composition is essential and that, in lieu thereof, the disclosure of the following information to the health professional, employee, or designated representative, would not satisfy the purposes described in paragraph (i)(3)(ii) of this section:

* * * * *

(7) If the chemical manufacturer, importer, or employer denies a written request for disclosure of a specific chemical identity or percentage composition, the denial must:

* * * * *

(iii) Include evidence to support the claim that the specific chemical identity or percent of composition is a trade secret;

* * * * *

(v) Explain in detail how alternative information may satisfy the specific medical or occupational health need without revealing the trade secret.

* * * * *

(9) * * *

(i) The chemical manufacturer, importer, or employer has supported the claim that the specific chemical identity or percentage composition is a trade secret;

* * * * *

(10) * * *

(i) If OSHA determines that the specific chemical identity or percentage composition requested under paragraph (i)(3) of this section is not a ''bona fide'' trade secret, or that it is a trade secret, but the requesting health professional, employee, or designated representative has a legitimate medical or occupational health need for the information, has executed a written confidentiality agreement, and has shown adequate means to protect the confidentiality of the information, the chemical manufacturer, importer, or employer will be subject to citation by OSHA.

(ii) If a chemical manufacturer, importer, or employer demonstrates to OSHA that the execution of a confidentiality agreement would not provide sufficient protection against the potential harm from the unauthorized disclosure of a trade secret, the Assistant Secretary may issue such orders or impose such additional limitations or conditions upon the disclosure of the requested chemical information as may be appropriate to assure that the occupational health services are provided without an undue risk of harm to the chemical manufacturer, importer, or employer.

(11) If a citation for a failure to release trade secret information is contested by the chemical manufacturer, importer, or employer, the matter will be adjudicated before the Occupational Safety and Health Review Commission in accordance with the Act's enforcement scheme and the applicable Commission rules of procedure. In accordance with the Commission rules, when a chemical manufacturer, importer, or employer continues to withhold the information during the contest, the Administrative Law Judge may review the citation and supporting documentation ''in camera'' or issue appropriate orders to protect the confidentiality of such matters.

* * * * *

(j) *Effective dates.* (1) Employers shall train employees regarding the new label elements and safety data sheets format by December 1, 2013.

(2) Chemical manufacturers, importers, distributors, and employers

shall be in compliance with all modified provisions of this section no later than June 1, 2015, except:

(i) After December 1, 2015, the distributor shall not ship containers labeled by the chemical manufacturer or importer unless the label has been modified to comply with paragraph (f)(1) of this section.

(ii) All employers shall, as necessary, update any alternative workplace labeling used under paragraph (f)(6) of this section, update the hazard communication program required by paragraph (h)(1), and provide any additional employee training in accordance with paragraph (h)(3) for newly identified physical or health hazards no later than June 1, 2016.

(3) Chemical manufacturers, importers, distributors, and employers may comply with either § 1910.1200 revised as of October 1, 2011, or the current version of this standard, or both during the transition period.

Appendix A to § 1910.1200—Health Hazard Criteria (Mandatory)

A.0 GENERAL CLASSIFICATION CONSIDERATIONS

A.0.1 Classification

A.0.1.1 The term ''hazard classification'' is used to indicate that only the intrinsic hazardous properties of chemicals are considered. Hazard classification incorporates three steps:

(a) Identification of relevant data regarding the hazards of a chemical;

(b) Subsequent review of those data to ascertain the hazards associated with the chemical;

(c) Determination of whether the chemical will be classified as hazardous and the degree of hazard.

A.0.1.2 For many hazard classes, the criteria are semi-quantitative or qualitative and expert judgment is required to interpret the data for classification purposes.

A.0.2 Available Data, Test Methods and Test Data Quality

A.0.2.1 There is no requirement for testing chemicals.

A.0.2.2 The criteria for determining health hazards are test method neutral, i.e., they do not specify particular test methods, as long as the methods are scientifically validated.

A.0.2.3 The term ''scientifically validated'' refers to the process by which the reliability and the relevance of a procedure are established for a particular purpose. Any test that determines hazardous properties, which is conducted according to recognized scientific principles, can be used for purposes of a hazard determination for health hazards. Test conditions need to be standardized so that the results are reproducible with a given substance, and the standardized test yields ''valid'' data for defining the hazard class of concern.

A.0.2.4 Existing test data are acceptable for classifying chemicals, although expert judgment also may be needed for classification purposes.

A.0.2.5 The effect of a chemical on biological systems is influenced, by the physico-chemical properties of the substance and/or ingredients of the mixture and the way in which ingredient substances are biologically available. A chemical need not be classified when it can be shown by conclusive experimental data from scientifically validated test methods that the chemical is not biologically available.

A.0.2.6 For classification purposes, epidemiological data and experience on the effects of chemicals on humans (e.g., occupational data, data from accident databases) shall be taken into account in the evaluation of human health hazards of a chemical.

A.0.3 Classification Based on Weight of Evidence

A.0.3.1 For some hazard classes, classification results directly when the data satisfy the criteria. For others, classification of a chemical shall be determined on the basis of the total weight of evidence using expert judgment. This means that all available information bearing on the classification of hazard shall be considered together, including the results of valid *in vitro* tests, relevant animal data, and human experience such as epidemiological and clinical studies and well-documented case reports and observations.

A.0.3.2 The quality and consistency of the data shall be considered. Information on chemicals related to the material being classified shall be considered as appropriate, as well as site of action and mechanism or mode of action study results. Both positive and negative results shall be considered together in a single weight-of-evidence determination.

A.0.3.3 Positive effects which are consistent with the criteria for classification, whether seen in humans or animals, shall normally justify classification. Where evidence is available from both humans and animals and there is a conflict between the findings, the quality and reliability of the evidence from both sources shall be evaluated in order to resolve the question of classification. Reliable, good quality human data shall generally have precedence over other data. However, even well-designed and conducted epidemiological studies may lack a sufficient number of subjects to detect relatively rare but still significant effects, or to assess potentially confounding factors. Therefore, positive results from well-conducted animal studies are not necessarily negated by the lack of positive human experience but require an assessment of the robustness, quality and statistical power of both the human and animal data.

A.0.3.4 Route of exposure, mechanistic information, and metabolism studies are pertinent to determining the relevance of an effect in humans. When such information raises doubt about relevance in humans, a lower classification may be warranted. When there is scientific evidence demonstrating that the mechanism or mode of action is not relevant to humans, the chemical should not be classified.

A.0.3.5 Both positive and negative results are considered together in the weight of evidence determination. However, a single positive study performed according to good scientific principles and with statistically and biologically significant positive results may justify classification.

A.0.4 Considerations for the Classification of Mixtures

A.0.4.1 For most hazard classes, the recommended process of classification of mixtures is based on the following sequence:

(a) Where test data are available for the complete mixture, the classification of the mixture will always be based on those data;

(b) Where test data are not available for the mixture itself, the bridging principles designated in each health hazard chapter of this appendix shall be considered for classification of the mixture;

(c) If test data are not available for the mixture itself, and the available information is not sufficient to allow application of the above-mentioned bridging principles, then the method(s) described in each chapter for estimating the hazards based on the information known will be applied to classify the mixture (e.g., application of cut-off values/concentration limits).

A.0.4.2 An exception to the above order or precedence is made for Carcinogenicity, Germ Cell Mutagenicity, and Reproductive Toxicity. For these three hazard classes, mixtures shall be classified based upon information on the ingredient substances, unless on a case-by-case basis, justification can be provided for classifying based upon the mixture as a whole. See chapters A.5, A.6, and A.7 for further information on case-by-case bases.

A.0.4.3 Use of cut-off values/concentration limits.

A.0.4.3.1 When classifying an untested mixture based on the hazards of its ingredients, cut-off values/concentration limits for the classified ingredients of the mixture are used for several hazard classes. While the adopted cut-off values/concentration limits adequately identify the hazard for most mixtures, there may be some that contain hazardous ingredients at lower concentrations than the specified cut-off values/concentration limits that still pose an identifiable hazard. There may also be cases where the cut-off value/concentration limit is considerably lower than the established non-hazardous level for an ingredient.

A.0.4.3.2 If the classifier has information that the hazard of an ingredient will be evident (i.e., it presents a health risk) below the specified cut-off value/concentration limit, the mixture containing that ingredient shall be classified accordingly.

A.0.4.3.3 In exceptional cases, conclusive data may demonstrate that the hazard of an ingredient will not be evident (i.e., it does not present a health risk) when present at a level above the specified cut-off value/concentration limit(s). In these cases the mixture may be classified according to those data. The data must exclude the possibility that the ingredient will behave in the mixture in a manner that would increase the hazard over that of the pure substance. Furthermore, the mixture must not contain ingredients that would affect that determination.

A.0.4.4 Synergistic or antagonistic effects.

When performing an assessment in accordance with these requirements, the evaluator must take into account all available information about the potential occurrence of synergistic effects among the ingredients of the mixture. Lowering classification of a mixture to a less hazardous category on the basis of antagonistic effects may be done only if the determination is supported by sufficient data.

A.0.5 Bridging Principles for the Classification of Mixtures Where Test Data Are Not Available for the Complete Mixture

A.0.5.1 Where the mixture itself has not been tested to determine its toxicity, but there are sufficient data on both the individual ingredients and similar tested mixtures to adequately characterize the hazards of the mixture, these data shall be used in accordance with the following bridging principles, subject to any specific provisions for mixtures for each hazard class. These principles ensure that the classification process uses the available data to the greatest extent possible in characterizing the hazards of the mixture.

A.0.5.1.1 Dilution.

For mixtures classified in accordance with A.1 through A.10 of this Appendix, if a tested mixture is diluted with a diluent that has an equivalent or lower toxicity classification than the least toxic original ingredient, and which is not expected to affect the toxicity of other ingredients, then:

(a) The new diluted mixture shall be classified as equivalent to the original tested mixture; or

(b) For classification of acute toxicity in accordance with A.1 of this Appendix, paragraph A.1.3.6 (the additivity formula) shall be applied.

A.0.5.1.2 Batching.

For mixtures classified in accordance with A.1 through A.10 of this Appendix, the toxicity of a tested production batch of a mixture can be assumed to be substantially equivalent to that of another untested production batch of the same mixture, when produced by or under the control of the same *chemical manufacturer,* unless there is reason to believe there is significant variation such that the toxicity of the untested batch has changed. If the latter occurs, a new classification is necessary.

A.0.5.1.3 Concentration of mixtures.

For mixtures classified in accordance with A.1, A.2, A.3, A.8, A.9, or A.10 of this Appendix, if a tested mixture is classified in Category 1, and the concentration of the ingredients of the tested mixture that are in Category 1 is increased, the resulting untested mixture shall be classified in Category 1.

A.0.5.1.4 Interpolation within one toxicity category.

For mixtures classified in accordance with A.1, A.2, A.3, A.8, A.9, or A.10 of this Appendix, for three mixtures (A, B and C) with identical ingredients, where mixtures A and B have been tested and are in the same toxicity category, and where untested mixture C has the same toxicologically active ingredients as mixtures A and B but has concentrations of toxicologically active ingredients intermediate to the concentrations in mixtures A and B, then mixture C is assumed to be in the same toxicity category as A and B.

A.0.5.1.5 Substantially similar mixtures.

For mixtures classified in accordance with A.1 through A.10 of this Appendix, given the following set of conditions:

(a) Where there are two mixtures:

(i) A + B;

(ii) C + B;

(b) The concentration of ingredient B is essentially the same in both mixtures;

(c) The concentration of ingredient A in mixture (i) equals that of ingredient C in mixture (ii);

(d) And data on toxicity for A and C are available and substantially equivalent; i.e., they are in the same hazard category and are not expected to affect the toxicity of B; then

If mixture (i) or (ii) is already classified based on test data, the other mixture can be assigned the same hazard category.

A.0.5.1.6 Aerosols.

For mixtures classified in accordance with A.1, A.2, A.3, A.4, A.8, or A.9 of this Appendix, an aerosol form of a mixture shall be classified in the same hazard category as the tested, non-aerosolized form of the mixture, provided the added propellant does not affect the toxicity of the mixture when spraying.

A.1 ACUTE TOXICITY

A.1.1 Definition

Acute toxicity refers to those adverse effects occurring following oral or dermal administration of a single dose of a substance, or multiple doses given within 24 hours, or an inhalation exposure of 4 hours.

A.1.2 Classification Criteria for Substances

A.1.2.1 Substances can be allocated to one of four toxicity categories based on acute toxicity by the oral, dermal or inhalation route according to the numeric cut-off criteria as shown in Table A.1.1. Acute toxicity values are expressed as (approximate) LD50 (oral, dermal) or LC50 (inhalation) values or as acute toxicity estimates (ATE). See the footnotes following Table A.1.1 for further explanation on the application of these values.

TABLE A.1.1—ACUTE TOXICITY HAZARD CATEGORIES AND ACUTE TOXICITY ESTIMATE (ATE) VALUES DEFINING THE RESPECTIVE CATEGORIES

Exposure route	Category 1	Category 2	Category 3	Category 4
Oral (mg/kg bodyweight) *see: Note (a), Note (b)*	≤5	>5 and ≤50	>50 and ≤300	>300 and ≤2000.
Dermal (mg/kg bodyweight) *see: Note (a), Note (b)*	≤5	>50 and ≤200	>200 and ≤1000	>1000 and ≤2000.
Inhalation—Gases (ppmV) *see: Note (a), Note (b), Note (c)*	≤100	>100 and ≤500	>500 and ≤2500	>2500 and ≤20000.
Inhalation—Vapors (mg/l) *see: Note (a), Note (b), Note (c), Note (d).*	≤0.5	>0.5 and ≤2.0	>2.0 and ≤10.0	>10.0 and ≤20.0.
Inhalation—Dusts and Mists (mg/l) *see: Note (a), Note (b), Note (c)*	≤0.05	>0.05 and ≤0.5	>0.5 and ≤1.0	>1.0 and ≤5.0.

Note: *Gas concentrations are expressed in parts per million per volume (ppmV).*

Notes to Table A.1.1:

(a) *The acute toxicity estimate (ATE) for the classification of a substance is derived using the LD_{50}/LC_{50} Stewardwhere available;*

(b) The acute toxicity estimate (ATE) for the classification of a substance or ingredient in a mixture is derived using:

(i) the LD_{50}/LC_{50} where available. Otherwise,

(ii) the appropriate conversion value from Table 1.2 that relates to the results of a range test, or

(iii) the appropriate conversion value from Table 1.2 that relates to a classification category;

(c) Inhalation cut-off values in the table are based on 4 hour testing exposures. Conversion of existing inhalation toxicity data which has been generated according to 1 hour exposure is achieved by dividing by a factor of 2 for gases and vapors and 4 for dusts and mists;

(d) For some substances the test atmosphere will be a vapor which consists of a combination of liquid and gaseous phases. For other substances the test atmosphere may consist of a vapor which is nearly all the gaseous phase. In these latter cases, classification is based on ppmV as follows: Category 1 (100 ppmV), Category 2 (500 ppmV), Category 3 (2500 ppmV), Category 4 (20000 ppmV).

The terms ''dust'', ''mist'' and ''vapor'' are defined as follows:

(i) Dust: solid particles of a substance or mixture suspended in a gas (usually air);

(ii) Mist: liquid droplets of a substance or mixture suspended in a gas (usually air);

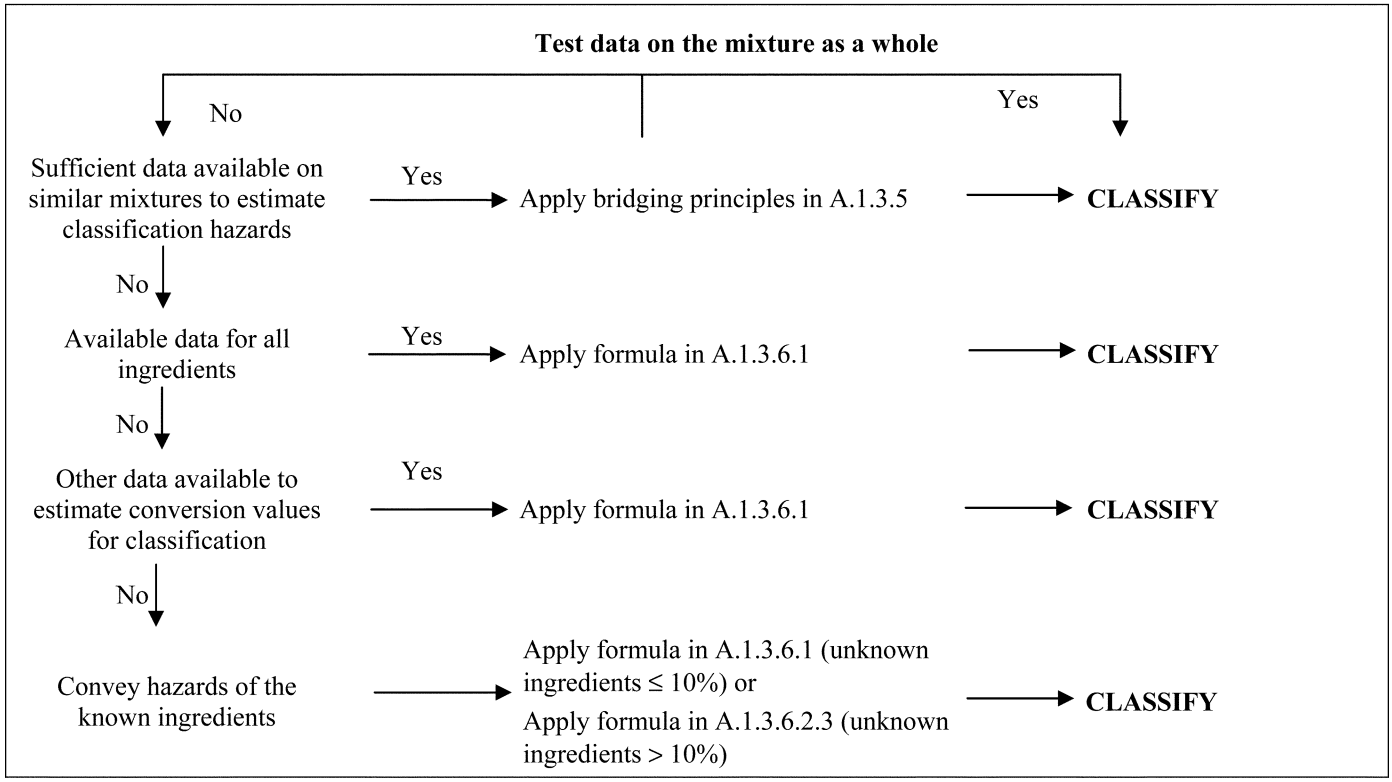
(iii) Vapor: the gaseous form of a substance or mixture released from its liquid or solid state.

A.1.2.3 The preferred test species for evaluation of acute toxicity by the oral and inhalation routes is the rat, while the rat or rabbit are preferred for evaluation of acute dermal toxicity. Test data already generated for the classification of chemicals under existing systems should be accepted when reclassifying these chemicals under the harmonized system. When experimental data for acute toxicity are available in several animal species, scientific judgment should be used in selecting the most appropriate LD_{50} value from among scientifically validated tests.

A.1.3 Classification Criteria for Mixtures

A.1.3.1 The approach to classification of mixtures for acute toxicity is tiered, and is dependent upon the amount of information available for the mixture itself and for its ingredients. The flow chart of Figure A.1.1 indicates the process that must be followed:

Figure A.1.1: Tiered approach to classification of mixtures for acute toxicity



A.1.3.2 Classification of mixtures for acute toxicity may be carried out for each route of exposure, but is only required for one route of exposure as long as this route is followed (estimated or tested) for all ingredients and there is no relevant evidence to suggest acute toxicity by multiple routes. When there is relevant evidence of acute toxicity by multiple routes of exposure, classification is to be conducted for all appropriate routes of exposure. All available information shall be considered. The pictogram and signal word used shall reflect the most severe hazard category; and all relevant hazard statements shall be used.

A.1.3.3 For purposes of classifying the hazards of mixtures in the tiered approach:

(a) The ''relevant ingredients'' of a mixture are those which are present in concentrations ≥1% (weight/weight for solids, liquids, dusts, mists and vapors and volume/volume for gases). If there is reason to suspect that an ingredient present at a concentration <1% will affect classification of the mixture for acute toxicity, that ingredient shall also be considered relevant. Consideration of ingredients present at a concentration <1% is particularly important when classifying untested mixtures which contain ingredients that are classified in Category 1 and Category 2;

(b) Where a classified mixture is used as an ingredient of another mixture, the actual or derived acute toxicity estimate (ATE) for that mixture is used when calculating the classification of the new mixture using the formulas in A.1.3.6.1 and A.1.3.6.2.4.

(c) If the converted acute toxicity point estimates for all ingredients of a mixture are within the same category, then the mixture should be classified in that category.

(d) When only range data (or acute toxicity hazard category information) are available for ingredients in a mixture, they may be converted to point estimates in accordance with Table A.1.2 when calculating the classification of the new mixture using the formulas in A.1.3.6.1 and A.1.3.6.2.4.

A.1.3.4 Classification of Mixtures Where Acute Toxicity Test Data Are Available for the Complete Mixture

Where the mixture itself has been tested to determine its acute toxicity, it is classified according to the same criteria as those used for substances, presented in Table A.1.1. If test data for the mixture are not available, the procedures presented below must be followed.

A.1.3.5 Classification of Mixtures Where Acute Toxicity Test Data Are Not Available for the Complete Mixture: Bridging Principles

A.1.3.5.1 Where the mixture itself has not been tested to determine its acute toxicity, but there are sufficient data on both the individual ingredients and similar tested mixtures to adequately characterize the hazards of the mixture, these data will be used in accordance with the following bridging principles as found in paragraph A.0.5 of this Appendix: Dilution, Batching, Concentration of mixtures, Interpolation within one toxicity category, Substantially similar mixtures, and Aerosols.

A.1.3.6 Classification of Mixtures Based on Ingredients of the Mixture (Additivity Formula)

A.1.3.6.1 Data available for all ingredients.

The acute toxicity estimate (ATE) of ingredients is considered as follows:

(a) Include ingredients with a known acute toxicity, which fall into any of the acute toxicity categories, or have an oral or dermal LD_{50} greater than 2000 but less than or equal to 5000 mg/kg body weight (or the equivalent dose for inhalation);

(b) Ignore ingredients that are presumed not acutely toxic (e.g., water, sugar);

(c) Ignore ingredients if the data available are from a limit dose test (at the upper threshold for Category 4 for the appropriate route of exposure as provided in Table A.1.1) and do not show acute toxicity.

Ingredients that fall within the scope of this paragraph are considered to be ingredients with a known acute toxicity estimate (ATE). See note (b) to Table A.1.1 and paragraph A.1.3.3 for appropriate application of available data to the equation below, and paragraph A.1.3.6.2.4.

The ATE of the mixture is determined by calculation from the ATE values for all relevant ingredients according to the following formula below for oral, dermal or inhalation toxicity:

$$\frac{100}{\mathrm{ATEmix}} = \sum_{n} \frac{\mathrm{Ci}}{\mathrm{ATE}_{i}}$$

Where:

Ci = concentration of ingredient i

n ingredients and i is running from 1 to n

ATEi = acute toxicity estimate of ingredient i.

A.1.3.6.2 Data are not available for one or more ingredients of the mixture.

A.1.3.6.2.1 Where an ATE is not available for an individual ingredient of the mixture, but available information provides a derived conversion value, the formula in A.1.3.6.1 may be applied. This information may include evaluation of:

(a) Extrapolation between oral, dermal and inhalation acute toxicity estimates. Such an evaluation requires appropriate pharmacodynamic and pharmacokinetic data;

(b) Evidence from human exposure that indicates toxic effects but does not provide lethal dose data;

(c) Evidence from any other toxicity tests/assays available on the substance that indicates toxic acute effects but does not necessarily provide lethal dose data; or

(d) Data from closely analogous substances using structure/activity relationships.

A.1.3.6.2.2 This approach requires substantial supplemental technical information, and a highly trained and experienced expert, to reliably estimate acute toxicity. If sufficient information is not available to reliably estimate acute toxicity, proceed to the provisions of A.1.3.6.2.3.

A.1.3.6.2.3 In the event that an ingredient with unknown acute toxicity is used in a mixture at a concentration ≥1%, and the mixture has not been classified based on testing of the mixture as a whole, the mixture cannot be attributed a definitive acute toxicity estimate. In this situation the mixture is classified based on the known ingredients only. (Note: A statement that × percent of the mixture consists of ingredient(s) of unknown toxicity is required on the label and safety data sheet in such cases; see Appendix C to this section, Allocation of Label Elements and Appendix D to this section, Safety Data Sheets.)

Where an ingredient with unknown acute toxicity is used in a mixture at a concentration ≥1%, and the mixture is not classified based on testing of the mixture as a whole, a statement that X% of the mixture consists of ingredient(s) of unknown acute toxicity is required on the label and safety data sheet in such cases; see Appendix C to this section, Allocation of Label Elements and Appendix D to this section, Safety Data Sheets.)

A.1.3.6.2.4 If the total concentration of the relevant ingredient(s) with unknown acute toxicity is ≤10% then the formula presented in A.1.3.6.1 must be used. If the total concentration of the relevant ingredient(s) with unknown acute toxicity is >10%, the formula presented in A.1.3.6.1 is corrected to adjust for the percentage of the unknown ingredient(s) as follows:

$$\frac{100 - \left(\sum C_{unknown} \text{ if} > 10\%\right)}{ATE_{mix}} = \sum_{n} \frac{Ci}{ATE_{i}}$$

TABLE A.1.2—CONVERSION FROM EXPERIMENTALLY OBTAINED ACUTE TOXICITY RANGE VALUES (OR ACUTE TOXICITY HAZARD CATEGORIES) TO ACUTE TOXICITY POINT ESTIMATES FOR USE IN THE FORMULAS FOR THE CLASSIFICATION OF MIXTURES

Exposure routes	Classification category or experimentally obtained acute toxicity range estimate	Converted acute toxicity point estimate
Oral (mg/kg bodyweight)	0 <Category 1 ≤5	0.5
	5 <Category 2 ≤50	5
	50 <Category 3 ≤300	100
	300 <Category 4 ≤2000	500
Dermal (mg/kg bodyweight)	0 <Category 1 ≤50	5
	50 <Category 2 ≤200	50
	200 <Category 3 ≤1000	300
	1000 <Category 4 ≤2000	1100
Gases (ppmV)	0 <Category 1 ≤100	10
	100 <Category 2 ≤500	100
	500 <Category 3 ≤2500	700
	2500 <Category 4 ≤20000	4500
Vapors (mg/l)	0 <Category 1 ≤0.5	0.05
	0.5 <Category 2 ≤2.0	0.5
	2.0 <Category 3 ≤10.0	3
	10.0 <Category 4 ≤20.0	11
Dust/mist (mg/l)	0 <Category 1 ≤0.05	0.005
	0.05 <Category 2 ≤0.5	0.05
	0.5 <Category 3 ≤1.0	0.5
	1.0 <Category 4 ≤5.0	1.5

Note: Gas concentrations are expressed in parts per million per volume (ppmV).

A.2 SKIN CORROSION/IRRITATION

A.2.1 Definitions and General Considerations

A.2.1.1 *Skin corrosion* is the production of irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis, following the application of a test substance for up to 4 hours. Corrosive reactions are typified by ulcers, bleeding, bloody scabs, and, by the end of observation at 14 days, by discoloration due to blanching of the skin, complete areas of alopecia, and scars. Histopathology should be considered to evaluate questionable lesions.

Skin irritation is the production of reversible damage to the skin following the application of a test substance for up to 4 hours.

A.2.1.2 Skin corrosion/irritation shall be classified using a tiered approach as detailed in figure A.2.1. Emphasis shall be placed upon existing human data (See A.0.2.6), followed by other sources of information. Classification results directly when the data satisfy the criteria in this section. In case the criteria cannot be directly applied, classification of a substance or a mixture is made on the basis of the total weight of evidence (See A.0.3.1). This means that all available information bearing on the determination of skin corrosion/irritation is considered together, including the results of appropriate scientifically validated in-vitro tests, relevant animal data, and human data such as epidemiological and clinical studies and well-documented case reports and observations.

A.2.2 Classification Criteria for Substances Using Animal Test Data

A.2.2.1 Corrosion

A.2.2.1.1 A corrosive substance is a chemical that produces destruction of skin tissue, namely, visible necrosis through the epidermis and into the dermis, in at least 1 of 3 tested animals after exposure up to a 4-hour duration. Corrosive reactions are typified by ulcers, bleeding, bloody scabs and, by the end of observation at 14 days, by discoloration due to blanching of the skin, complete areas of alopecia and scars. Histopathology should be considered to discern questionable lesions.

A.2.2.1.2 Three sub-categories of Category 1 are provided in Table A.2.1, all of which shall be regulated as Category 1.

TABLE A.2.1—SKIN CORROSION CATEGORY AND SUB-CATEGORIES

Category 1: corrosive	Corrosive sub-categories	Corrosive in ≥1 of 3 animals	
		Exposure	Observation
	1A	≤3 min	≤1 h.
	1B	>3 min ≤1 h	≤14 days.
	1C	>1 h ≤4 h	≤14 days.

A.2.2.2 Irritation

A.2.2.2.1 A single irritant category (Category 2) is presented in the Table A.2.2. The major criterion for the irritant category is that at least 2 tested animals have a mean score of ≥2.3 ≤4.0.

TABLE A.2.2—SKIN IRRITATION CATEGORY

	Criteria
Irritant (Category 2)	(1) Mean value of ≥2.3 ≤4.0 for erythema/eschar or for edema in at least 2 of 3 tested animals from gradings at 24, 48 and 72 hours after patch removal or, if reactions are delayed, from grades on 3 consecutive days after the onset of skin reactions; or (2) Inflammation that persists to the end of the observation period normally 14 days in at least 2 animals, particularly taking into account alopecia (limited area), hyperkeratosis, hyperplasia, and scaling; or (3) In some cases where there is pronounced variability of response among animals, with very definite positive effects related to chemical exposure in a single animal but less than the criteria above.

A.2.2.2.2 Animal irritant responses within a test can be quite variable, as they are with corrosion. A separate irritant criterion accommodates cases when there is a significant irritant response but less than the mean score criterion for a positive test. For example, a substance might be designated as an irritant if at least 1 of 3 tested animals shows a very elevated mean score throughout the study, including lesions persisting at the end of an observation period of normally 14 days. Other responses could also fulfil this criterion. However, it should be ascertained that the responses are the result of chemical exposure. Addition of this criterion increases the sensitivity of the classification system.

A.2.2.2.3 Reversibility of skin lesions is another consideration in evaluating irritant responses. When inflammation persists to the end of the observation period in 2 or more test animals, taking into consideration alopecia (limited area), hyperkeratosis, hyperplasia and scaling, then a chemical should be considered to be an irritant.

A.2.3 Classification Criteria for Substances Using Other Data Elements

A.2.3.1 Existing human and animal data including information from single or repeated exposure should be the first line of analysis, as they give information directly relevant to effects on the skin. If a substance is highly toxic by the dermal route, a skin corrosion/irritation study may not be practicable since the amount of test substance to be applied would considerably exceed the toxic dose and, consequently, would result in the death of the animals. When observations are made of skin corrosion/irritation in acute toxicity studies and are observed up through the limit dose, these data may be used for classification provided that the dilutions used and species tested are equivalent. *In vitro* alternatives that have been scientifically validated shall be used to make classification decisions. Solid substances (powders) may become corrosive or irritant when moistened or in contact with moist skin or mucous membranes. Likewise, pH extremes like ≤2 and ≥11.5 may indicate skin effects, especially when associated with significant buffering capacity. Generally, such substances are expected to produce significant effects on the skin. In the absence of any other information, a substance is considered corrosive (Skin Category 1) if it has a pH ≤2 or a pH ≥11.5. However, if consideration of alkali/acid reserve suggests the substance or mixture may not be corrosive despite the low or high pH value, then further evaluation may be necessary. In some cases enough information may be available from structurally related compounds to make classification decisions.

A.2.3.2 A *tiered approach* to the evaluation of initial information shall be used (Figure A.2.1) recognizing that all elements may not be relevant in certain cases.

A.2.3.3 The tiered approach explains how to organize information on a substance and to make a weight-of-evidence decision about hazard assessment and hazard classification.

A.2.3.4 All the above information that is available on a substance shall be evaluated. Although information might be gained from the evaluation of single parameters within a

tier, there is merit in considering the totality of existing information and making an overall weight of evidence determination. This is especially true when there is information available on some but not all parameters. Emphasis shall be placed upon existing human experience and data, followed by animal experience and testing data, followed by other sources of information, but case-by-case determinations are necessary.

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Figure A.2.1: Tiered evaluation of skin corrosion and irritation potential

Step	Parameter	Finding	Conclusion
1a	Existing human or animal data[1]	Skin corrosive	Category 1[2]
	↓ Not corrosive or no data		
1b	Existing human or animal data[1]	Skin irritant	Category 2[2]
	↓ Not an irritant or no data		
1c	Existing human or animal data[1]	Not a skin corrosive or skin irritant	Not classified
	↓ No/Insufficient data		
2:	Other, existing skin data in animals[3]	Skin corrosive Skin irritant	Category 1[2] Category 2[2]
	↓ No/Insufficient data		
3:	Existing skin corrosive *ex vivo / in vitro* data[4]	Positive: Skin corrosive	Category 1[2]
	↓ Not corrosive or no data		
	Existing skin irritation *ex vivo / in vitro* data[4]	Positive: Skin irritant	Category 2[2]
	↓	Negative: Not a skin irritant[5]	Not classified
	↓ No/Insufficient data		
4:	pH-Based assessment (with consideration of buffering capacity of the chemical, or no buffering capacity data)[5]	pH ≤ 2 or ≥ 11.5	Category 1[2]
	↓ Not a pH extreme, No pH data or extreme pH with low/no buffering capacity		
5:	Validated Structure/Activity Relationship (SAR) models	Skin corrosive	Category 1[2]
	↓ No/Insufficient data	Skin irritant	Category 2[2]
6:	Consideration of the total Weight of Evidence[6]	Skin corrosive	Category 1[2]
	↓ No concern based on consideration of the sum of available data	Skin irritant	Category 2[2]
7:	**Not Classified**		Not classified

Notes to Figure A.2.1:

[1] *Evidence of existing human or animal data may be derived from single or repeated exposure(s) in occupational, consumer, transportation, or emergency response scenarios; from ethically-conducted human clinical studies; or from purposely-generated data from animal studies conducted according to scientifically validated test methods (at present, there is no internationally accepted test method for human skin irritation testing).*

[2] *Classify in the appropriate harmonized category, as shown in Tables A.2.1 and A.2.2.*

[3] *Pre-existing animal data (e.g. from an acute dermal toxicity test or a sensitisation test) should be carefully reviewed to determine if sufficient skin corrosion/irritation evidence is available through other, similar information. For example, classification/categorization may be done on the basis of whether a chemical has or has not produced any skin irritation in an acute dermal toxicity test in animals at the limit dose, or produces very toxic effects in an acute dermal toxicity test in animals. In the latter case, the chemical would be classified as being very hazardous by the dermal route for acute toxicity, and it would be moot whether the chemical is also irritating or corrosive on the skin. It should be kept in mind in evaluating acute dermal toxicity information that the reporting of dermal lesions may be incomplete, testing and observations may be made on a species other than the rabbit, and species may differ in sensitivity in their responses.*

[4] *Evidence from studies using scientifically validated protocols with isolated human/animal tissues or other, non-tissue-based, though scientifically validated, protocols should be assessed. Examples of scientifically validated test methods for skin corrosion include OECD TG 430 (Transcutaneous Electrical Resistance Test (TER)), 431 (Human Skin Model Test), and 435 (Membrane Barrier Test Method). OECD TG 439 (Reconstructed Human Epidermis Test Method) is a scientifically validated in vitro test method for skin irritation.*

[5] *Measurement of pH alone may be adequate, but assessment of acid or alkali reserve (buffering capacity) would be preferable. Presently, there is no scientifically validated and internationally accepted method for assessing this parameter.*

[6] *All information that is available on a chemical should be considered and an overall determination made on the total weight of evidence. This is especially true when there is conflict in information available on some parameters. Professional judgment should be exercised in making such a determination.*

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A.2.4 Classification Criteria for Mixtures

A.2.4.1 Classification of Mixtures When Data Are Available for the Complete Mixture

A.2.4.1.1 The mixture shall be classified using the criteria for substances (See A.2.3).

A.2.4.2 Classification of Mixtures When Data Are Not Available for the Complete Mixture: Bridging Principles

A.2.4.2.1 Where the mixture itself has not been tested to determine its skin corrosion/irritation, but there are sufficient data on both the individual ingredients and similar tested mixtures to adequately characterize the hazards of the mixture, these data will be used in accordance with the following bridging principles, as found in paragraph A.0.5 of this Appendix: Dilution, Batching, Concentration of mixtures, Interpolation within one toxicity category, Substantially similar mixtures, and Aerosols.

A.2.4.3 Classification of Mixtures When Data Are Available for All Ingredients or Only for Some Ingredients of the Mixture

A.2.4.3.1 For purposes of classifying the skin corrosion/irritation hazards of mixtures in the tiered approach:

The ''relevant ingredients'' of a mixture are those which are present in concentrations >1% (weight/weight for solids, liquids, dusts, mists and vapors and volume/volume for gases.) If the classifier has reason to suspect that an ingredient present at a concentration <1% will affect classification of the mixture for skin corrosion/irritation, that ingredient shall also be considered relevant.

A.2.4.3.2 In general, the approach to classification of mixtures as irritant or corrosive to skin when data are available on the ingredients, but not on the mixture as a whole, is based on the theory of additivity, such that each corrosive or irritant ingredient contributes to the overall irritant or corrosive properties of the mixture in proportion to its potency and concentration. A weighting factor of 10 is used for corrosive ingredients when they are present at a concentration below the concentration limit for classification with Category 1, but are at a concentration that will contribute to the classification of the mixture as an irritant. The mixture is classified as corrosive or irritant when the sum of the concentrations of such ingredients exceeds a cut-off value/concentration limit.

A.2.4.3.3 Table A.2.3 below provides the cut-off value/concentration limits to be used to determine if the mixture is considered to be an irritant or a corrosive to the skin.

A.2.4.3.4 Particular care shall be taken when classifying certain types of chemicals such as acids and bases, inorganic salts, aldehydes, phenols, and surfactants. The approach explained in A.2.4.3.1 and A.2.4.3.2 might not work given that many of such substances are corrosive or irritant at concentrations <1%. For mixtures containing strong acids or bases the pH should be used as classification criteria since pH will be a better indicator of corrosion than the concentration limits of Table A.2.3. A mixture containing corrosive or irritant ingredients that cannot be classified based on the additivity approach shown in Table A.2.3, due to chemical characteristics that make this approach unworkable, should be classified as Skin Category 1 if it contains ≥1% of a corrosive ingredient and as Skin Category 2 when it contains ≥3% of an irritant ingredient. Classification of mixtures with ingredients for which the approach in Table A.2.3 does not apply is summarized in Table A.2.4 below.

A.2.4.3.5 On occasion, reliable data may show that the skin corrosion/irritation of an ingredient will not be evident when present at a level above the generic concentration cut-off values mentioned in Tables A.2.3 and A.2.4. In these cases the mixture could be classified according to those data (See *Use of cut-off values/concentration limits,* paragraph A.0.4.3 of this Appendix).

A.2.4.3.6 If there are data showing that (an) ingredient(s) may be corrosive or irritant at a concentration of <1% (corrosive) or <3% (irritant), the mixture shall be classified accordingly (See *Use of cut-off values/concentration limits,* paragraph A.0.4.3 of this Appendix).

TABLE A.2.3—CONCENTRATION OF INGREDIENTS OF A MIXTURE CLASSIFIED AS SKIN CATEGORY 1 OR 2 THAT WOULD TRIGGER

[Category 1 or 2]

Sum of ingredients classified as:	Concentration triggering classification of a mixture as:	
	Skin corrosive	Skin irritant
	Category 1	Category 2
Skin Category 1	≥5%	≥1% but <5%.
Skin Category 2		≥10%.
(10 × Skin Category 1) + Skin Category 2		≥10%.

TABLE A.2.4—CONCENTRATION OF INGREDIENTS OF A MIXTURE FOR WHICH THE ADDITIVITY APPROACH DOES NOT APPLY, THAT WOULD TRIGGER CLASSIFICATION OF THE MIXTURE AS HAZARDOUS TO SKIN

Ingredient:	Concentration:	Mixture classified as: Skin
Acid with pH ≤2	≥1%	Category 1.
Base with pH ≥11.5	≥1%	Category 1.
Other corrosive (Category 1) ingredients for which additivity does not apply	≥1%	Category 1.
Other irritant (Category 2) ingredients for which additivity does not apply, including acids and bases	≥3%	Category 2.

A.3 SERIOUS EYE DAMAGE/EYE IRRITATION

A.3.1 Definitions and General Considerations

A.3.1.1 *Serious eye damage* is the production of tissue damage in the eye, or serious physical decay of vision, following application of a test substance to the anterior surface of the eye, which is not fully reversible within 21 days of application.

Eye irritation is the production of changes in the eye following the application of test substance to the anterior surface of the eye, which are fully reversible within 21 days of application.

A.3.1.2 Serious eye damage/eye irritation shall be classified using a tiered approach as detailed in Figure A.3.1. Emphasis shall be placed upon existing human data (See A.0.2.6), followed by animal data, followed by other sources of information. Classification results directly when the data satisfy the criteria in this section. In case the criteria cannot be directly applied, classification of a substance or a mixture is made on the basis of the total weight of evidence (See A.0.3.1). This means that all available information bearing on the determination of serious eye damage/eye irritation is considered together, including the results of appropriate scientifically validated *in vitro* tests, relevant animal data, and human data such as epidemiological and clinical studies and well-documented case reports and observations.

A.3.2 Classification Criteria for Substances Using Animal Test Data

A.3.2.1 Irreversible effects on the eye/serious damage to eyes (Category 1).

A single hazard category is provided in Table A.3.1, for substances that have the potential to seriously damage the eyes. Category 1, irreversible effects on the eye, includes the criteria listed below. These observations include animals with grade 4 cornea lesions and other severe reactions (e.g. destruction of cornea) observed at any time during the test, as well as persistent corneal opacity, discoloration of the cornea by a dye substance, adhesion, pannus, and interference with the function of the iris or other effects that impair sight. In this context, persistent lesions are considered those which are not fully reversible within an observation period of normally 21 days. Category 1 also contains substances fulfilling the criteria of corneal opacity ≥3 and/or iritis >1.5 detected in a Draize eye test with rabbits, because severe lesions like these usually do not reverse within a 21-day observation period.

TABLE A.3.1—IRREVERSIBLE EYE EFFECTS

A substance is classified as Serious Eye Damage Category 1 (irreversible effects on the eye) when it produces:
(a) at least in one tested animal, effects on the cornea, iris or conjunctiva that are not expected to reverse or have not fully reversed within an observation period of normally 21 days; and/or
(b) at least in 2 of 3 tested animals, a positive response of:
(i) corneal opacity ≥3; and/or
(ii) iritis >1.5;
calculated as the mean scores following grading at 24, 48 and 72 hours after instillation of the substance.

A.3.2.2 Reversible effects on the eye (Category 2).

A single category is provided in Table A.3.2 for substances that have the potential to induce reversible eye irritation.

TABLE A.3.2—REVERSIBLE EYE EFFECTS

A substance is classified as Eye irritant Category 2A (irritating to eyes) when it produces in at least in 2 of 3 tested animals a positive response of:
(i) corneal opacity ≥1; and/or
(ii) iritis ≥1; and/or
(iii) conjunctival redness ≥2; and/or
(iv) conjunctival edema (chemosis) ≥2

TABLE A.3.2—REVERSIBLE EYE EFFECTS—Continued

calculated as the mean scores following grading at 24, 48 and 72 hours after instillation of the substance, and which fully reverses within an observation period of normally 21 days.
An eye irritant is considered mildly irritating to eyes (Category 2B) when the effects listed above are fully reversible within 7 days of observation.

A.3.2.3 For those chemicals where there is pronounced variability among animal responses, this information may be taken into account in determining the classification.

A.3.3 Classification Criteria for Substances Using Other Data Elements

A.3.3.1 Existing human and animal data should be the first line of analysis, as they give information directly relevant to effects on the eye. Possible skin corrosion shall be evaluated prior to consideration of serious eye damage/eye irritation in order to avoid testing for local effects on eyes with skin corrosive substances. *In vitro* alternatives that have been scientifically validated and accepted shall be used to make classification decisions. Likewise, pH extremes like ≤2 and ≥11.5, may indicate serious eye damage, especially when associated with significant buffering capacity. Generally, such substances are expected to produce significant effects on the eyes. In the absence of any other information, a mixture/substance is considered to cause serious eye damage (Eye Category 1) if it has a pH ≤2 or ≥11.5. However, if consideration of acid/alkaline reserve suggests the substance may not have the potential to cause serious eye damage despite the low or high pH value, then further evaluation may be necessary. In some cases enough information may be available from structurally related compounds to make classification decisions.

A.3.3.2 A tiered approach to the evaluation of initial information shall be used where applicable, recognizing that all elements may not be relevant in certain cases (Figure A.3.1).

A.3.3.3 The tiered approach explains how to organize existing information on a substance and to make a weight-of-evidence decision, where appropriate, about hazard assessment and hazard classification.

A.3.3.4 All the above information that is available on a substance shall be evaluated. Although information might be gained from the evaluation of single parameters within a tier, consideration should be given to the totality of existing information and making an overall weight-of-evidence determination. This is especially true when there is conflict in information available on some parameters.

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Figure A.3.1 Evaluation strategy for serious eye damage and eye irritation (See also Figure A.2.1)

Step	Parameter	Finding	Conclusion
1a:	Existing human or animal data, eye[1]	Serious Eye Damage	Category 1[2]
		Eye Irritant	Category 2[2]
	No/insufficient data or unknown		
1b:	Existing human or animal data, skin corrosion	Skin corrosive	Category 1[2]
	No/insufficient data or unknown		
1c:	Existing human or animal data, eye[1]	Existing data that show that substance does not cause serious eye damage or eye irritation	Not Classified
	No/insufficient data		
2:	Other, existing skin/eye data in animals[3]	Yes; existing data that show that substance may cause serious eye damage or eye irritation	Category1 or Category 2[2]
	No/insufficient data		
3:	Existing *ex vivo / in vitro* data[4]	Positive: serious eye damage	Category 1[2]
		Positive: eye irritant	Category 2[2]
	No/insufficient data / negative response		
4:	pH-Based assessment (with consideration of buffering capacity of the chemical, or no buffering capacity data)[5]	pH ≤ 2 or ≥11.5	Category 1[2]
	Not a pH extreme, no pH data, or extreme pH with low/no buffering capacity		
5:	Validated structure/activity relationship (SAR) models	Severe damage to eyes	Category 1[2]
		Eye irritant	Category 2[2]
		Skin Corrosive	Category 1[2]
	No/insufficient data		
6:	Consideration of the total weight of evidence[6]	Serious eye damage	Category 1[2]
		Eye irritant	Category 2[2]
	No concern based on consideration of the sum of available data		
7:	**Not Classified**		

Notes to Figure A.3.1:

[1] *Evidence of existing human or animal data may be derived from single or repeated exposure(s) in occupational, consumer, transportation, or emergency response scenarios; from ethically-conducted human clinical studies; or from purposely-generated data from animal studies conducted according to scientifically validated test methods. At present, there are no internationally accepted test methods for human skin or eye irritation testing.*

[2] *Classify in the appropriate harmonized category, as shown in Tables A.3.1 and A.3.2.*

[3] *Pre-existing animal data should be carefully reviewed to determine if sufficient skin or eye corrosion/irritation evidence is available through other, similar information.*

[4] *Evidence from studies using scientifically validated protocols with isolated human/animal tissues or other, non-tissue-based, though scientifically validated, protocols should be assessed. Examples of, scientifically validated test methods for identifying eye corrosives and severe irritants (i.e., Serious Eye Damage) include OECD TG 437 (Bovine Corneal Opacity and Permeability (BCOP)) and TG 438 (Isolated Chicken Eye). Positive test results from a scientifically validated in vitro test for skin corrosion would likely also lead to a conclusion to classify as causing Serious Eye Damage.*

[5] *Measurement of pH alone may be adequate, but assessment of acid or alkali reserve (buffering capacity) would be preferable.*

[6] *All information that is available on a chemical should be considered and an overall determination made on the total weight of evidence. This is especially true when there is conflict in information available on some parameters. The weight of evidence including information on skin irritation could lead to classification of eye irritation. It is recognized that not all skin irritants are eye irritants as well. Professional judgment should be exercised in making such a determination.*

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A.3.4 Classification Criteria for Mixtures

A.3.4.1 Classification of Mixtures When Data Are Available for the Complete Mixture

A.3.4.1.1 The mixture will be classified using the criteria for substances.

A.3.4.1.2 Unlike other hazard classes, there are alternative tests available for skin corrosivity of certain types of chemicals that can give an accurate result for classification purposes, as well as being simple and relatively inexpensive to perform. When considering testing of the mixture, chemical manufacturers are encouraged to use a tiered weight of evidence strategy as included in the criteria for classification of substances for skin corrosion and serious eye damage and eye irritation to help ensure an accurate classification, as well as avoid unnecessary animal testing. In the absence of any other information, a mixture is considered to cause serious eye damage (Eye Category 1) if it has a pH ≤2 or ≥11.5. However, if consideration of acid/alkaline reserve suggests the substance or mixture may not have the potential to cause serious eye damage despite the low or high pH value, then further evaluation may be necessary.

A.3.4.2 Classification of Mixtures When Data Are Not Available for the Complete Mixture: Bridging Principles

A.3.4.2.1 Where the mixture itself has not been tested to determine its skin corrosivity or potential to cause serious eye damage or eye irritation, but there are sufficient data on both the individual ingredients and similar tested mixtures to adequately characterize the hazards of the mixture, these data will be used in accordance with the following bridging principles, as found in paragraph A.0.5 of this Appendix: Dilution, Batching, Concentration of mixtures, Interpolation within one toxicity category, Substantially similar mixtures, and Aerosols.

A.3.4.3 Classification of Mixtures When Data Are Available for All Ingredients or Only for Some Ingredients of the Mixture

A.3.4.3.1 For purposes of classifying the eye corrosion/irritation hazards of mixtures in the tiered approach:

The ''relevant ingredients'' of a mixture are those which are present in concentrations >1% (weight/weight for solids, liquids, dusts, mists and vapors and volume/volume for gases). If the classifier has reason to suspect that an ingredient present at a concentration <1% will affect classification of the mixture for eye corrosion/irritation, that ingredient shall also be considered relevant.

A.3.4.3.2 In general, the approach to classification of mixtures as seriously damaging to the eye or eye irritant when data are available on the ingredients, but not on the mixture as a whole, is based on the theory of additivity, such that each corrosive or irritant ingredient contributes to the overall irritant or corrosive properties of the mixture in proportion to its potency and concentration. A weighting factor of 10 is used for corrosive ingredients when they are present at a concentration below the concentration limit for classification with Category 1, but are at a concentration that will contribute to the classification of the mixture as an irritant. The mixture is classified as seriously damaging to the eye or eye irritant when the sum of the concentrations of such ingredients exceeds a threshold cut-off value/concentration limit.

A.3.4.3.3 Table A.3.3 provides the cut-off value/concentration limits to be used to determine if the mixture should be classified as seriously damaging to the eye or an eye irritant.

A.3.4.3.4 Particular care must be taken when classifying certain types of chemicals such as acids and bases, inorganic salts, aldehydes, phenols, and surfactants. The approach explained in A.3.4.3.1 and A.3.4.3.2 might not work given that many of such substances are corrosive or irritant at concentrations <1%. For mixtures containing strong acids or bases, the pH should be used as classification criteria (See A.3.4.1) since pH will be a better indicator of serious eye damage than the concentration limits of Table A.3.3. A mixture containing corrosive or irritant ingredients that cannot be classified based on the additivity approach applied in Table A.3.3 due to chemical characteristics that make this approach unworkable, should be classified as Eye Category 1 if it contains ≥1% of a corrosive ingredient and as Eye Category 2 when it contains ≥3% of an irritant ingredient. Classification of mixtures with ingredients for which the approach in Table A.3.3 does not apply is summarized in Table A.3.4.

A.3.4.3.5 On occasion, reliable data may show that the reversible/irreversible eye effects of an ingredient will not be evident when present at a level above the generic cut-off values/concentration limits mentioned in Tables A.3.3 and A.3.4. In these cases the mixture could be classified according to those data (See also A.0.4.3 *Use of cut-off values/concentration limits*''). On occasion, when it is expected that the skin corrosion/irritation or the reversible/irreversible eye effects of an ingredient will not be evident when present at a level above the generic concentration/cut-off levels mentioned in Tables A.3.3 and A.3.4, testing of the mixture may be considered. In those cases, the tiered weight of evidence strategy should be applied as referred to in section A.3.3, Figure A.3.1 and explained in detail in this chapter.

A.3.4.3.6 If there are data showing that (an) ingredient(s) may be corrosive or irritant at a concentration of <1% (corrosive) or <3% (irritant), the mixture should be classified accordingly (See also paragraph A.0.4.3, *Use of cut-off values/concentration limits*).

TABLE A.3.3—CONCENTRATION OF INGREDIENTS OF A MIXTURE CLASSIFIED AS SKIN CATEGORY 1 AND/OR EYE CATEGORY 1 OR 2 THAT WOULD TRIGGER CLASSIFICATION OF THE MIXTURES AS HAZARDOUS TO THE EYE

Sum of ingredients classified as:	Concentration triggering classification of a mixture as:	
	Irreversible eye effects	Reversible eye effects
	Category 1	Category 2
Eye or Skin Category 1	≥3%	≥1% but <3%.

TABLE A.3.3—CONCENTRATION OF INGREDIENTS OF A MIXTURE CLASSIFIED AS SKIN CATEGORY 1 AND/OR EYE CATEGORY 1 OR 2 THAT WOULD TRIGGER CLASSIFICATION OF THE MIXTURES AS HAZARDOUS TO THE EYE—Continued

Sum of ingredients classified as:	Concentration triggering classification of a mixture as:	
	Irreversible eye effects	Reversible eye effects
	Category 1	Category 2
Eye Category 2		≥10%.
(10 × Eye Category 1) + Eye Category 2		≥10%.
Skin Category 1 + Eye Category 1	≥3%	≥1% but <3%.
10 × (Skin Category 1 + Eye Category 1) + Eye Category 2		≥10%.

Note: *A mixture may be classified as Eye Category 2B in cases when all relevant ingredients are classified as Eye Category 2B.*

TABLE A.3.4—CONCENTRATION OF INGREDIENTS OF A MIXTURE FOR WHICH THE ADDITIVITY APPROACH DOES NOT APPLY, THAT WOULD TRIGGER CLASSIFICATION OF THE MIXTURE AS HAZARDOUS TO THE EYE

Ingredient	Concentration	Mixture classified as: Eye
Acid with pH ≤2	≥1%	Category 1.
Base with pH ≥11.5	≥1%	Category 1.
Other corrosive (Category 1) ingredients for which additivity does not apply	≥1%	Category 1.
Other irritant (Category 2) ingredients for which additivity does not apply, including acids and bases	≥3%	Category 2.

A.4 RESPIRATORY OR SKIN SENSITIZATION

A.4.1 Definitions and General Considerations

A.4.1.1 *Respiratory sensitizer* means a chemical that will lead to hypersensitivity of the airways following inhalation of the chemical.

Skin sensitizer means a chemical that will lead to an allergic response following skin contact.

A.4.1.2 For the purpose of this chapter, sensitization includes two phases: the first phase is induction of specialized immunological memory in an individual by exposure to an allergen. The second phase is elicitation, i.e., production of a cell-mediated or antibody-mediated allergic response by exposure of a sensitized individual to an allergen.

A.4.1.3 For respiratory sensitization, the pattern of induction followed by elicitation phases is shared in common with skin sensitization. For skin sensitization, an induction phase is required in which the immune system learns to react; clinical symptoms can then arise when subsequent exposure is sufficient to elicit a visible skin reaction (elicitation phase). As a consequence, predictive tests usually follow this pattern in which there is an induction phase, the response to which is measured by a standardized elicitation phase, typically involving a patch test. The local lymph node assay is the exception, directly measuring the induction response. Evidence of skin sensitization in humans normally is assessed by a diagnostic patch test.

A.4.1.4 Usually, for both skin and respiratory sensitization, lower levels are necessary for elicitation than are required for induction.

A.4.1.5 The hazard class ''respiratory or skin sensitization'' is differentiated into:

(a) Respiratory sensitization; and

(b) Skin sensitization.

A.4.2 Classification Criteria for Substances

A.4.2.1 Respiratory Sensitizers

A.4.2.1.1 Hazard Categories.

A.4.2.1.1.1 Effects seen in either humans or animals will normally justify classification in a weight of evidence approach for respiratory sensitizers. Substances may be allocated to one of the two sub-categories 1A or 1B using a weight of evidence approach in accordance with the criteria given in Table A.4.1 and on the basis of reliable and good quality evidence from human cases or epidemiological studies and/or observations from appropriate studies in experimental animals.

A.4.2.1.1.2 Where data are not sufficient for sub-categorization, respiratory sensitizers shall be classified in Category 1.

TABLE A.4.1—HAZARD CATEGORY AND SUB-CATEGORIES FOR RESPIRATORY SENSITIZERS

Category 1	Respiratory sensitizer
	A substance is classified as a respiratory sensitizer. (a) if there is evidence in humans that the substance can lead to specific respiratory hypersensitivity and/or (b) if there are positive results from an appropriate animal test.[1]
Sub-category 1A	Substances showing a high frequency of occurrence in humans; or a probability of occurrence of a high sensitization rate in humans based on animal or other tests.[1] Severity of reaction may also be considered.
Sub-category 1B	Substances showing a low to moderate frequency of occurrence in humans; or a probability of occurrence of a low to moderate sensitization rate in humans based on animal or other tests.[1] Severity of reaction may also be considered.

A.4.2.1.2 Human evidence.

A.4.2.1.2.1 Evidence that a substance can lead to specific respiratory hypersensitivity will normally be based on human experience. In this context, hypersensitivity is normally seen as asthma, but other hypersensitivity reactions such as rhinitis/conjunctivitis and alveolitis are also considered. The condition will have the clinical character of an allergic reaction. However, immunological mechanisms do not have to be demonstrated.

A.4.2.1.2.2 When considering the human evidence, it is necessary that in addition to

[1] *At this writing, recognized and validated animal models for the testing of respiratory hypersensitivity are not available. Under certain circumstances, data from animal studies may provide valuable information in a weight of evidence assessment.*

the evidence from the cases, the following be taken into account:

(a) The size of the population exposed;

(b) The extent of exposure.

A.4.2.1.2.3 The evidence referred to above could be:

(a) Clinical history and data from appropriate lung function tests related to exposure to the substance, confirmed by other supportive evidence which may include:

(i) *In vivo* immunological test (e.g., skin prick test);

(ii) *In vitro* immunological test (e.g., serological analysis);

(iii) Studies that may indicate other specific hypersensitivity reactions where immunological mechanisms of action have not been proven, e.g., repeated low-level irritation, pharmacologically mediated effects;

(iv) A chemical structure related to substances known to cause respiratory hypersensitivity;

(b) Data from positive bronchial challenge tests with the substance conducted according to accepted guidelines for the determination of a specific hypersensitivity reaction.

A.4.2.1.2.4 Clinical history should include both medical and occupational history to determine a relationship between exposure to a specific substance and development of respiratory hypersensitivity. Relevant information includes aggravating factors both in the home and workplace, the onset and progress of the disease, family history and medical history of the patient in question. The medical history should also include a note of other allergic or airway disorders from childhood and smoking history.

A.4.2.1.2.5 The results of positive bronchial challenge tests are considered to provide sufficient evidence for classification on their own. It is, however, recognized that in practice many of the examinations listed above will already have been carried out.

A.4.2.1.3 Animal studies.

A.4.2.1.3.1 Data from appropriate animal studies [2] which may be indicative of the potential of a substance to cause sensitization by inhalation in humans [3] may include:

(a) Measurements of Immunoglobulin E (IgE) and other specific immunological parameters, for example in mice

(b) Specific pulmonary responses in guinea pigs.

A.4.2.2 Skin Sensitizers

A.4.2.2.1 Hazard categories.

A.4.2.2.1.1 Effects seen in either humans or animals will normally justify classification in a weight of evidence approach for skin sensitizers. Substances may be allocated to one of the two sub-categories 1A or 1B using a weight of evidence approach in accordance with the criteria given in Table A.4.2 and on the basis of reliable and good quality evidence from human cases or epidemiological studies and/or observations from appropriate studies in experimental animals according to the guidance values provided in A.4.2.2.2.1 and A.4.2.2.3.2 for sub-category 1A and in A.4.2.2.2.2 and A.4.2.2.3.3 for sub-category 1B.

A.4.2.2.1.2 Where data are not sufficient for sub-categorization, skin sensitizers shall be classified in Category 1.

TABLE A.4.2—HAZARD CATEGORY AND SUB-CATEGORIES FOR SKIN SENSITIZERS

Category 1	Skin sensitizer
	A substance is classified as a skin sensitizer. (a) if there is evidence in humans that the substance can lead to sensitization by skin contact in a substantial number of persons, or (b) if there are positive results from an appropriate animal test.
Sub-category 1A	Substances showing a high frequency of occurrence in humans and/or a high potency in animals can be presumed to have the potential to produce significant sensitization in humans. Severity of reaction may also be considered.
Sub-category 1B	Substances showing a low to moderate frequency of occurrence in humans and/or a low to moderate potency in animals can be presumed to have the potential to produce sensitization in humans. Severity of reaction may also be considered.

A.4.2.2.2 Human evidence.

A.4.2.2.2.1 Human evidence for sub-category 1A may include:

(a) Positive responses at ≤500 μg/cm^2 (Human Repeat Insult Patch Test (HRIPT), Human Maximization Test (HMT)—induction threshold);

(b) Diagnostic patch test data where there is a relatively high and substantial incidence of reactions in a defined population in relation to relatively low exposure;

(c) Other epidemiological evidence where there is a relatively high and substantial incidence of allergic contact dermatitis in relation to relatively low exposure.

A.4.2.2.2.2 Human evidence for sub-category 1B may include:

(a) Positive responses at >500 μg/cm^2 (HRIPT, HMT—induction threshold);

(b) Diagnostic patch test data where there is a relatively low but substantial incidence of reactions in a defined population in relation to relatively high exposure;

(c) Other epidemiological evidence where there is a relatively low but substantial incidence of allergic contact dermatitis in relation to relatively high exposure.

A.4.2.2.3 Animal studies

A.4.2.2.3.1 For Category 1, when an adjuvant type test method for skin sensitization is used, a response of at least 30% of the animals is considered as positive. For a non-adjuvant Guinea pig test method a response of at least 15% of the animals is considered positive. For Category 1, a stimulation index of three or more is considered a positive response in the local lymph node assay.[4]

A.4.2.2.3.2 Animal test results for sub-category 1A can include data with values indicated in Table A.4.3 below:

TABLE A.4.3—ANIMAL TEST RESULTS FOR SUB-CATEGORY 1A

Assay	Criteria
Local lymph node assay	EC3 value ≤2%.
Guinea pig maximization test	≥30% responding at ≤0.1% intradermal induction dose *or* ≥60% responding at >0.1% to ≤1% intradermal induction dose.
Buehler assay	≥15% responding at ≤0.2% topical induction dose *or*

[2] *At this writing, recognized and validated animal models for the testing of respiratory hypersensitivity are not available. Under certain circumstances, data from animal studies may provide valuable information in a weight of evidence assessment.*

[3] *The mechanisms by which substances induce symptoms of asthma are not yet fully known. For preventive measures, these substances are considered respiratory sensitizers. However, if on the basis of the evidence, it can be demonstrated that these substances induce symptoms of asthma by irritation only in people with bronchial hyperactivity, they should not be considered as respiratory sensitizers.*

[4] *Test methods for skin sensitization are described in OECD Guideline 406 (the Guinea Pig Maximization test and the Buehler guinea pig test) and Guideline 429 (Local Lymph Node Assay). Other methods may be used provided that they are scientifically validated. The Mouse Ear Swelling Test (MEST), appears to be a reliable screening test to detect moderate to strong sensitizers, and can be used, in accordance with professional judgment, as a first stage in the assessment of skin sensitization potential.*

TABLE A.4.3—ANIMAL TEST RESULTS FOR SUB-CATEGORY 1A—Continued

Assay	Criteria
	≥60% responding at >0.2% to ≤20% topical induction dose.

Note: *EC3 refers to the estimated concentration of test chemical required to induce a stimulation index of 3 in the local lymph node assay.*

A.4.2.2.3.3 Animal test results for sub-category 1B can include data with values indicated in Table A.4.4 below:

TABLE A.4.4—ANIMAL TEST RESULTS FOR SUB-CATEGORY 1B

Assay	Criteria
Local lymph node assay	EC3 value >2%.
Guinea pig maximization test	≥30% to <60% responding at >0.1% to ≤1% intradermal induction dose or ≥30% responding at >1% intradermal induction dose.
Buehler assay	≥15% to <60% responding at >0.2% to ≤20% topical induction dose or ≥15% responding at >20% topical induction dose.

Note: *EC3 refers to the estimated concentration of test chemical required to induce a stimulation index of 3 in the local lymph node assay.*

A.4.2.2.4 Specific considerations.

A.4.2.2.4.1 For classification of a substance, evidence shall include one or more of the following using a weight of evidence approach:

(a) Positive data from patch testing, normally obtained in more than one dermatology clinic;

(b) Epidemiological studies showing allergic contact dermatitis caused by the substance. Situations in which a high proportion of those exposed exhibit characteristic symptoms are to be looked at with special concern, even if the number of cases is small;

(c) Positive data from appropriate animal studies;

(d) Positive data from experimental studies in man (See paragraph A.0.2.6 of this Appendix);

(e) Well documented episodes of allergic contact dermatitis, normally obtained in more than one dermatology clinic;

(f) Severity of reaction.

A.4.2.2.4.2 Evidence from animal studies is usually much more reliable than evidence from human exposure. However, in cases where evidence is available from both sources, and there is conflict between the results, the quality and reliability of the evidence from both sources must be assessed in order to resolve the question of classification on a case-by-case basis. Normally, human data are not generated in controlled experiments with volunteers for the purpose of hazard classification but rather as part of risk assessment to confirm lack of effects seen in animal tests. Consequently, positive human data on skin sensitization are usually derived from case-control or other, less defined studies. Evaluation of human data must, therefore, be carried out with caution as the frequency of cases reflect, in addition to the inherent properties of the substances, factors such as the exposure situation, bioavailability, individual predisposition and preventive measures taken. Negative human data should not normally be used to negate positive results from animal studies. For both animal and human data, consideration should be given to the impact of vehicle.

A.4.2.2.4.3 If none of the above-mentioned conditions are met, the substance need not be classified as a skin sensitizer. However, a combination of two or more indicators of skin sensitization, as listed below, may alter the decision. This shall be considered on a case-by-case basis.

(a) Isolated episodes of allergic contact dermatitis;

(b) Epidemiological studies of limited power, e.g., where chance, bias or confounders have not been ruled out fully with reasonable confidence;

(c) Data from animal tests, performed according to existing guidelines, which do not meet the criteria for a positive result described in A.4.2.2.3, but which are sufficiently close to the limit to be considered significant;

(d) Positive data from non-standard methods;

(e) Positive results from close structural analogues.

A.4.2.2.4.4 Immunological contact urticaria.

A.4.2.2.4.4.1 Substances meeting the criteria for classification as respiratory sensitizers may, in addition, cause immunological contact urticaria. Consideration shall be given to classifying these substances as skin sensitizers.

A.4.2.2.4.4.2 Substances which cause immunological contact urticaria without meeting the criteria for respiratory sensitizers shall be considered for classification as skin sensitizers.

A.4.2.2.4.4.3 There is no recognized animal model available to identify substances which cause immunological contact urticaria. Therefore, classification will normally be based on human evidence, similar to that for skin sensitization.

A.4.3 Classification Criteria for Mixtures

A.4.3.1 Classification of Mixtures When Data Are Available for the Complete Mixture

When reliable and good quality evidence, as described in the criteria for substances, from human experience or appropriate studies in experimental animals, is available for the mixture, then the mixture shall be classified by weight of evidence evaluation of these data. Care must be exercised in evaluating data on mixtures that the dose used does not render the results inconclusive.

A.4.3.2 Classification of Mixtures When Data Are Not Available for the Complete Mixture: Bridging Principles

A.4.3.2.1 Where the mixture itself has not been tested to determine its sensitizing properties, but there are sufficient data on both the individual ingredients and similar tested mixtures to adequately characterize the hazards of the mixture, these data will be used in accordance with the following agreed bridging principles as found in paragraph A.0.5 of this Appendix: Dilution, Batching, Concentration of mixtures, Interpolation, Substantially similar mixtures, and Aerosols.

A.4.3.3 Classification of Mixtures When Data Are Available for All Ingredients or Only for Some Ingredients of the Mixture

The mixture shall be classified as a respiratory or skin sensitizer when at least one ingredient has been classified as a respiratory or skin sensitizer and is present at or above the appropriate cut-off value/concentration limit for the specific endpoint as shown in Table A.4.5.

TABLE A.4.5—CUT-OFF VALUES/CONCENTRATION LIMITS OF INGREDIENTS OF A MIXTURE CLASSIFIED AS EITHER RESPIRATORY SENSITIZERS OR SKIN SENSITIZERS THAT WOULD TRIGGER CLASSIFICATION OF THE MIXTURE

Ingredient classified as:	Cut-off values/concentration limits triggering classification of a mixture as:		
	Respiratory Sensitizer Category 1		Skin Sensitizer Category 1
	Solid/liquid	Gas	All physical states
Respiratory Sensitizer, Category 1	≥0.1%	≥0.1%	
Respiratory Sensitizer, Sub-category 1A	≥0.1%	≥0.1%	
Respiratory Sensitizer, Sub-category 1B	≥1.0%	≥0.2%	
Skin Sensitizer, Category 1			≥0.1%
Skin Sensitizer, Sub-category 1A			≥0.1%
Skin Sensitizer, Sub-category 1B			≥1.0%

A.5 GERM CELL MUTAGENICITY

A.5.1 Definitions and General Considerations

A.5.1.1 A *mutation* is defined as a permanent change in the amount or structure of the genetic material in a cell. The term *mutation* applies both to heritable genetic changes that may be manifested at the phenotypic level and to the underlying DNA modifications when known (including, for example, specific base pair changes and chromosomal translocations). The term *mutagenic* and *mutagen* will be used for agents giving rise to an increased occurrence of mutations in populations of cells and/or organisms.

A.5.1.2 The more general terms *genotoxic* and *genotoxicity* apply to agents or processes which alter the structure, information content, or segregation of DNA, including those which cause DNA damage by interfering with normal replication processes, or which in a non-physiological manner (temporarily) alter its replication. Genotoxicity test results are usually taken as indicators for mutagenic effects.

A.5.1.3 This hazard class is primarily concerned with chemicals that may cause mutations in the germ cells of humans that can be transmitted to the progeny. However, mutagenicity/genotoxicity tests *in vitro* and in mammalian somatic cells *in vivo* are also considered in classifying substances and mixtures within this hazard class.

A.5.2 Classification Criteria for Substances

A.5.2.1 The classification system provides for two different categories of germ cell mutagens to accommodate the weight of evidence available. The two-category system is described in the Figure A.5.1.

FIGURE A.5.1—HAZARD CATEGORIES FOR GERM CELL MUTAGENS

CATEGORY 1: Substances known to induce heritable mutations or to be regarded as if they induce heritable mutations in the germ cells of humans.

Category 1A: Substances known to induce heritable mutations in germ cells of humans.

Positive evidence from human epidemiological studies.

Category 1B: Substances which should be regarded as if they induce heritable mutations in the germ cells of humans.

(a) Positive result(s) from *in vivo* heritable germ cell mutagenicity tests in mammals; or

(b) Positive result(s) from *in vivo* somatic cell mutagenicity tests in mammals, in combination with some evidence that the substance has potential to cause mutations to germ cells. This supporting evidence may, for example, be derived from mutagenicity/genotoxicity tests in germ cells *in vivo,* or by demonstrating the ability of the substance or its metabolite(s) to interact with the genetic material of germ cells; or

(c) Positive results from tests showing mutagenic effects in the germ cells of humans, without demonstration of transmission to progeny; for example, an increase in the frequency of aneuploidy in sperm cells of exposed people.

CATEGORY 2: Substances which cause concern for humans owing to the possibility that they may induce heritable mutations in the germ cells of humans.

Positive evidence obtained from experiments in mammals and/or in some cases from *in vitro* experiments, obtained from:

(a) Somatic cell mutagenicity tests *in vivo,* in mammals; or

(b) Other *in vivo* somatic cell genotoxicity tests which are supported by positive results from *in vitro* mutagenicity assays.

Note: *Substances which are positive in in vitro mammalian mutagenicity assays, and which also show chemical structure activity relationship to known germ cell mutagens, should be considered for classification as Category 2 mutagens.*

A.5.2.2 Specific considerations for classification of substances as germ cell mutagens:

A.5.2.2.1 To arrive at a classification, test results are considered from experiments determining mutagenic and/or genotoxic effects in germ and/or somatic cells of exposed animals. Mutagenic and/or genotoxic effects determined in *in vitro* tests shall also be considered.

A.5.2.2.2 The system is hazard based, classifying chemicals on the basis of their intrinsic ability to induce mutations in germ cells. The scheme is, therefore, not meant for the (quantitative) risk assessment of chemical substances.

A.5.2.2.3 Classification for heritable effects in human germ cells is made on the basis of scientifically validated tests. Evaluation of the test results shall be done using expert judgment and all the available evidence shall be weighed for classification.

A.5.2.2.4 The classification of substances shall be based on the total weight of evidence available, using expert judgment. In those instances where a single well-conducted test is used for classification, it shall provide clear and unambiguously positive results. The relevance of the route of exposure used in the study of the substance compared to the route of human exposure should also be taken into account.

A.5.3 Classification Criteria for Mixtures [5]

A.5.3.1 Classification of Mixtures When Data Are Available for All Ingredients or Only for Some Ingredients of the Mixture

A.5.3.1.1 Classification of mixtures shall be based on the available test data for the

[5] *It should be noted that the classification criteria for health hazards usually include a tiered scheme in which test data available on the complete mixture are considered as the first tier in the evaluation, followed by the applicable bridging principles, and lastly, cut-off values/concentration limits or additivity. However, this approach is not used for Germ Cell Mutagenicity. These criteria for Germ Cell Mutagenicity consider the cut-off values/concentration limits as the primary tier and allow*

Continued

individual ingredients of the mixture using cut-off values/concentration limits for the ingredients classified as germ cell mutagens.

A.5.3.1.2 The mixture will be classified as a mutagen when at least one ingredient has been classified as a Category 1A, Category 1B or Category 2 mutagen and is present at or above the appropriate cut-off value/concentration limit as shown in Table A.5.1 below for Category 1 and 2 respectively.

TABLE A.5.1—CUT-OFF VALUES/CONCENTRATION LIMITS OF INGREDIENTS OF A MIXTURE CLASSIFIED AS GERM CELL MUTAGENS THAT WOULD TRIGGER CLASSIFICATION OF THE MIXTURE

Ingredient classified as:	Cut-off/concentration limits triggering classification of a mixture as:	
	Category 1 mutagen	Category 2 mutagen
Category 1A/B mutagen	≥0.1%	
Category 2 mutagen		≥1.0%

Note: *The cut-off values/concentration limits in the table above apply to solids and liquids (w/w units) as well as gases (v/v units).*

A.5.3.2 Classification of Mixtures When Data Are Available for the Mixture Itself

The classification may be modified on a case-by-case basis based on the available test data for the mixture as a whole. In such cases, the test results for the mixture as a whole must be shown to be conclusive taking into account dose and other factors such as duration, observations and analysis (e.g. statistical analysis, test sensitivity) of germ cell mutagenicity test systems.

A.5.3.3 Classification of Mixtures When Data Are Not Available for the Complete Mixture: Bridging Principles

A.5.3.3.1 Where the mixture itself has not been tested to determine its germ cell mutagenicity hazard, but there are sufficient data on both the individual ingredients and similar tested mixtures to adequately characterize the hazards of the mixture, these data will be used in accordance with the following bridging principles as found in paragraph A.0.5 of this Appendix: Dilution, Batching, and Substantially similar mixtures.

A.5.4 Examples of Scientifically Validated Test Methods

A.5.4.1 Examples of *in vivo* heritable germ cell mutagenicity tests are:
(a) Rodent dominant lethal mutation test (OECD 478)
(b) Mouse heritable translocation assay (OECD 485)
(c) Mouse specific locus test

A.5.4.2 Examples of *in vivo* somatic cell mutagenicity tests are:
(a) Mammalian bone marrow chromosome aberration test (OECD 475)
(b) Mouse spot test (OECD 484)
(c) Mammalian erythrocyte micronucleus test (OECD 474)

A.5.4.3 Examples of mutagenicity/genotoxicity tests in germ cells are:
(a) Mutagenicity tests:
(i) Mammalian spermatogonial chromosome aberration test (OECD 483)
(ii) Spermatid micronucleus assay
(b) Genotoxicity tests:
(i) Sister chromatid exchange analysis in spermatogonia
(ii) Unscheduled DNA synthesis test (UDS) in testicular cells

A.5.4.4 Examples of genotoxicity tests in somatic cells are:
(a) Liver Unscheduled DNA Synthesis (UDS) *in vivo* (OECD 486)
(b) Mammalian bone marrow Sister Chromatid Exchanges (SCE)

A.5.4.5 Examples of *in vitro* mutagenicity tests are:
(a) *In vitro* mammalian chromosome aberration test (OECD 473)
(b) *In vitro* mammalian cell gene mutation test (OECD 476)
(c) Bacterial reverse mutation tests (OECD 471)

A.5.4.6 As new, scientifically validated tests arise, these may also be used in the total weight of evidence to be considered.

A.6 CARCINOGENICITY

A.6.1 Definitions

Carcinogen means a substance or a mixture of substances which induce cancer or increase its incidence. Substances and mixtures which have induced benign and malignant tumors in well-performed experimental studies on animals are considered also to be presumed or suspected human carcinogens unless there is strong evidence that the mechanism of tumor formation is not relevant for humans.

Classification of a substance or mixture as posing a carcinogenic hazard is based on its inherent properties and does not provide information on the level of the human cancer risk which the use of the substance or mixture may represent.

A.6.2 Classification Criteria for Substances [6]

A.6.2.1 For the purpose of classification for carcinogenicity, substances are allocated to one of two categories based on strength of evidence and additional weight of evidence considerations. In certain instances, route-specific classification may be warranted.

FIGURE A.6.1—HAZARD CATEGORIES FOR CARCINOGENS

CATEGORY 1: Known or presumed human carcinogens.

The classification of a substance as a Category 1 carcinogen is done on the basis of epidemiological and/or animal data. This classification is further distinguished on the basis of whether the evidence for classification is largely from human data (Category 1A) or from animal data (Category 1B):

Category 1A: Known to have carcinogenic potential for humans. Classification in this category is largely based on human evidence.

Category 1B: Presumed to have carcinogenic potential for humans. Classification in this category is largely based on animal evidence.

The classification of a substance in Category 1A and 1B is based on strength of evidence together with weight of evidence considerations (See paragraph A.6.2.5). Such evidence may be derived from:

—human studies that establish a causal relationship between human exposure to a substance and the development of cancer (known human carcinogen); or

—animal experiments for which there is sufficient evidence to demonstrate animal carcinogenicity (presumed human carcinogen).

In addition, on a case by case basis, scientific judgment may warrant a decision of presumed human carcinogenicity derived from studies showing limited evidence of carcinogenicity in humans together with limited evidence of carcinogenicity in experimental animals.

CATEGORY 2: Suspected human carcinogens.

the classification to be modified only on a case-by-case evaluation based on available test data for the mixture as a whole.

[6] *See Non-mandatory Appendix F Part A for further guidance regarding hazard classification for carcinogenicity. This appendix is consistent with the GHS adn is provided as guidance excerpted from the International Agency for Research on Cancer (IARC) ''Monographs on the Evaluation of Carcinogenic Risks to Humans'' (2006).*

FIGURE A.6.1—HAZARD CATEGORIES FOR CARCINOGENS—Continued

The classification of a substance in Category 2 is done on the basis of evidence obtained from human and/or animal studies, but which is not sufficiently convincing to place the substance in Category 1A or B. This classification is based on strength of evidence together with weight of evidence considerations (See paragraph A.6.2.5). Such evidence may be from either limited evidence of carcinogenicity in human studies or from limited evidence of carcinogenicity in animal studies.
Other considerations: Where the weight of evidence for the carcinogenicity of a substance does not meet the above criteria, any positive study conducted in accordance with established scientific principles, and which reports statistically significant findings regarding the carcinogenic potential of the substance, must be noted on the safety data sheet.

A.6.2.2 Classification as a carcinogen is made on the basis of evidence from reliable and acceptable methods, and is intended to be used for substances which have an intrinsic property to produce such toxic effects. The evaluations are to be based on all existing data, peer-reviewed published studies and additional data accepted by regulatory agencies.

A.6.2.3 *Carcinogen classification* is a one-step, criterion-based process that involves two interrelated determinations: evaluations of strength of evidence and consideration of all other relevant information to place substances with human cancer potential into hazard categories.

A.6.2.4 *Strength of evidence* involves the enumeration of tumors in human and animal studies and determination of their level of statistical significance. Sufficient human evidence demonstrates causality between human exposure and the development of cancer, whereas sufficient evidence in animals shows a causal relationship between the agent and an increased incidence of tumors. Limited evidence in humans is demonstrated by a positive association between exposure and cancer, but a causal relationship cannot be stated. Limited evidence in animals is provided when data suggest a carcinogenic effect, but are less than sufficient. (Guidance on consideration of important factors in the classification of carcinogenicity and a more detailed description of the terms ''limited'' and ''sufficient'' have been developed by the International Agency for Research on Cancer (IARC) and are provided in non-mandatory Appendix F).

A.6.2.5 *Weight of evidence:* Beyond the determination of the strength of evidence for carcinogenicity, a number of other factors should be considered that influence the overall likelihood that an agent may pose a carcinogenic hazard in humans. The full list of factors that influence this determination is very lengthy, but some of the important ones are considered here.

A.6.2.5.1 These factors can be viewed as either increasing or decreasing the level of concern for human carcinogenicity. The relative emphasis accorded to each factor depends upon the amount and coherence of evidence bearing on each. Generally there is a requirement for more complete information to decrease than to increase the level of concern. Additional considerations should be used in evaluating the tumor findings and the other factors in a case-by-case manner.

A.6.2.5.2 Some important factors which may be taken into consideration, when assessing the overall level of concern are:

(a) Tumor type and background incidence;

(b) Multisite responses;

(c) Progression of lesions to malignancy;

(d) Reduced tumor latency;

Additional factors which may increase or decrease the level of concern include:

(e) Whether responses are in single or both sexes;

(f) Whether responses are in a single species or several species;

(g) Structural similarity or not to a substance(s) for which there is good evidence of carcinogenicity;

(h) Routes of exposure;

(i) Comparison of absorption, distribution, metabolism and excretion between test animals and humans;

(j) The possibility of a confounding effect of excessive toxicity at test doses; and,

(k) Mode of action and its relevance for humans, such as mutagenicity, cytotoxicity with growth stimulation, mitogenesis, immunosuppression.

Mutagenicity: It is recognized that genetic events are central in the overall process of cancer development. Therefore evidence of mutagenic activity *in vivo* may indicate that a substance has a potential for carcinogenic effects.

A.6.2.5.3 A substance that has not been tested for carcinogenicity may in certain instances be classified in Category 1A, Category 1B, or Category 2 based on tumor data from a structural analogue together with substantial support from consideration of other important factors such as formation of common significant metabolites, e.g., for benzidine congener dyes.

A.6.2.5.4 The classification should also take into consideration whether or not the substance is absorbed by a given route(s); or whether there are only local tumors at the site of administration for the tested route(s), and adequate testing by other major route(s) show lack of carcinogenicity.

A.6.2.5.5 It is important that whatever is known of the physico-chemical, toxicokinetic and toxicodynamic properties of the substances, as well as any available relevant information on chemical analogues, i.e., structure activity relationship, is taken into consideration when undertaking classification.

A.6.3 Classification Criteria for Mixtures [7]

A.6.3.1 The mixture shall be classified as a carcinogen when at least one ingredient has been classified as a Category 1 or Category 2 carcinogen and is present at or above the appropriate cut-off value/concentration limit as shown in Table A.6.1.

TABLE A.6.1—CUT-OFF VALUES/CONCENTRATION LIMITS OF INGREDIENTS OF A MIXTURE CLASSIFIED AS CARCINOGEN THAT WOULD TRIGGER CLASSIFICATION OF THE MIXTURE

Ingredient classified as:	Category 1 carcinogen	Category 2 carcinogen
Category 1 carcinogen	≥0.1%	
Category 2 carcinogen		≥0.1% (note 1).

Note: *If a Category 2 carcinogen ingredient is present in the mixture at a concentration between 0.1% and 1%, information is required on the SDS for a product. However, a label warning is optional. If a Category 2 carcinogen ingredient is present in the mixture at a concentration of ≥1%, both an SDS and a label is required and the information must be included on each.*

[7] *It should be noted that the classification criteria for health hazards usually include a tiered scheme in which test data available on the complete mixture are considered as the first tier in the evaluation, followed by the applicable bridging principles, and lastly, cut-off values/concentration limit or additivity. However, this approach is not used for Carcinogenicity. These criteria for Carcinogenicity consider the cut-off values/concentration limits as the primary tier and allow the classification to be modified only on a case-by-case evaluation based on available test data for the mixture as a whole.*

A.6.3.2 Classification of Mixtures When Data Are Available for the Complete Mixture

A mixture may be classified based on the available test data for the mixture as a whole. In such cases, the test results for the mixture as a whole must be shown to be conclusive taking into account dose and other factors such as duration, observations and analysis (e.g., statistical analysis, test sensitivity) of carcinogenicity test systems.

A.6.3.3 Classification of Mixtures When Data Are Not Available for the Complete Mixture: Bridging Principles

Where the mixture itself has not been tested to determine its carcinogenic hazard, but there are sufficient data on both the individual ingredients and similar tested mixtures to adequately characterize the hazards of the mixture, these data will be used in accordance with the following bridging principles as found in paragraph A.0.5 of this Appendix: Dilution; Batching; and Substantially similar mixtures.

A.6.4 Classification of Carcinogenicity [8]

A.6.4.1 Chemical manufacturers, importers and employers evaluating chemicals may treat the following sources as establishing that a substance is a carcinogen or potential carcinogen for hazard communication purposes in lieu of applying the criteria described herein:

A.6.4.1.1 National Toxicology Program (NTP), ''Report on Carcinogens'' (latest edition);

A.6.4.1.2 International Agency for Research on Cancer (IARC) ''Monographs on the Evaluation of Carcinogenic Risks to Humans'' (latest editions)

A.6.4.2 Where OSHA has included cancer as a health hazard to be considered by classifiers for a chemical covered by 29 CFR part 1910, Subpart Z, Toxic and Hazardous Substances, chemical manufacturers, importers, and employers shall classify the chemical as a carcinogen.

A.7 REPRODUCTIVE TOXICITY

A.7.1 Definitions and General Considerations

A.7.1.1 *Reproductive toxicity* includes *adverse effects on sexual function and fertility* in adult males and females, as well as *adverse effects on development of the offspring.* Some reproductive toxic effects cannot be clearly assigned to either impairment of sexual function and fertility or to developmental toxicity. Nonetheless, chemicals with these effects shall be classified as reproductive toxicants.

For classification purposes, the known induction of genetically based inheritable effects in the offspring is addressed in *Germ cell mutagenicity* (See A.5).

A.7.1.2 *Adverse effects on sexual function and fertility* means any effect of chemicals that interferes with reproductive ability or sexual capacity. This includes, but is not limited to, alterations to the female and male reproductive system, adverse effects on onset of puberty, gamete production and transport, reproductive cycle normality, sexual behaviour, fertility, parturition, pregnancy outcomes, premature reproductive senescence, or modifications in other functions that are dependent on the integrity of the reproductive systems.

A.7.1.3 *Adverse effects on development of the offspring* means any effect of chemicals which interferes with normal development of the conceptus either before or after birth, which is induced during pregnancy or results from parental exposure. These effects can be manifested at any point in the life span of the organism. The major manifestations of developmental toxicity include death of the developing organism, structural abnormality, altered growth and functional deficiency.

A.7.1.4 Adverse effects on or via lactation are also included in reproductive toxicity, but for classification purposes, such effects are treated separately (See A.7.2.1).

A.7.2 Classification Criteria for Substances

A.7.2.1 For the purpose of classification for reproductive toxicity, substances shall be classified in one of two categories in accordance with Figure A.7.1(a). Effects on sexual function and fertility, and on development, shall be considered. In addition, effects on or via lactation shall be classified in a separate hazard category in accordance with Figure A.7.1(b).

FIGURE A.7.1(a)—HAZARD CATEGORIES FOR REPRODUCTIVE TOXICANTS

CATEGORY 1: Known or presumed human reproductive toxicant.

Substance shall be classified in Category 1 for reproductive toxicity when they are known to have produced an adverse effect on sexual function and fertility or on development in humans or when there is evidence from animal studies, possibly supplemented with other information, to provide a strong presumption that the substance has the capacity to interfere with reproduction in humans. The classification of a substance is further distinguished on the basis of whether the evidence for classification is primarily from human data (Category 1A) or from animal data (Category 1B).

Category 1A: Known human reproductive toxicant.

The classification of a substance in this category is largely based on evidence from humans.

Category 1B: Presumed human reproductive toxicant.

The classification of a substance in this category is largely based on evidence from experimental animals. Data from animal studies shall provide sufficient evidence of an adverse effect on sexual function and fertility or on development in the absence of other toxic effects, or if occurring together with other toxic effects the adverse effect on reproduction is considered not to be a secondary non-specific consequence of other toxic effects. However, when there is mechanistic information that raises doubt about the relevance of the effect for humans, classification in Category 2 may be more appropriate.

CATEGORY 2: Suspected human reproductive toxicant.

Substances shall be classified in Category 2 for reproductive toxicity when there is some evidence from humans or experimental animals, possibly supplemented with other information, of an adverse effect on sexual function and fertility, or on development, in the absence of other toxic effects, or if occurring together with other toxic effects the adverse effect on reproduction is considered not to be a secondary non-specific consequence of the other toxic effects, and where the evidence is not sufficiently convincing to place the substance in Category 1. For instance, deficiencies in the study may make the quality of evidence less convincing, and in view of this, Category 2 would be the more appropriate classification.

FIGURE A.7.1(b)—HAZARD CATEGORY FOR EFFECTS ON OR VIA LACTATION

EFFECTS ON OR VIA LACTATION

Effects on or via lactation shall be classified in a separate single category. Chemicals that are absorbed by women and have been shown to interfere with lactation or that may be present (including metabolites) in breast milk in amounts sufficient to cause concern for the health of a breastfed child, shall be classified to indicate this property hazardous to breastfed babies. This classification shall be assigned on the basis of:

(a) absorption, metabolism, distribution and excretion studies that indicate the likelihood the substance would be present in potentially toxic levels in breast milk; and/or

[8] *See Non-mandatory Appendix F for further guidance regarding hazard classification for carcinogenicity and how to relate carcinogenicity classification information from IARC and NTP to GHS.*

FIGURE A.7.1(b)—HAZARD CATEGORY FOR EFFECTS ON OR VIA LACTATION—Continued

(b) results of one or two generation studies in animals which provide clear evidence of adverse effect in the offspring due to transfer in the milk or adverse effect on the quality of the milk; and/or
(c) human evidence indicating a hazard to babies during the lactation period.

A.7.2.2 Basis of Classification

A.7.2.2.1 Classification is made on the basis of the criteria, outlined above, an assessment of the total weight of evidence, and the use of expert judgment. Classification as a reproductive toxicant is intended to be used for substances which have an intrinsic, specific property to produce an adverse effect on reproduction and substances should not be so classified if such an effect is produced solely as a non-specific secondary consequence of other toxic effects.

A.7.2.2.2 In the evaluation of toxic effects on the developing offspring, it is important to consider the possible influence of maternal toxicity.

A.7.2.2.3 For human evidence to provide the primary basis for a Category 1A classification there must be reliable evidence of an adverse effect on reproduction in humans. Evidence used for classification shall be from well conducted epidemiological studies, if available, which include the use of appropriate controls, balanced assessment, and due consideration of bias or confounding factors. Less rigorous data from studies in humans may be sufficient for a Category 1A classification if supplemented with adequate data from studies in experimental animals, but classification in Category 1B may also be considered.

A.7.2.3 Weight of Evidence

A.7.2.3.1 Classification as a reproductive toxicant is made on the basis of an assessment of the total weight of evidence using expert judgment. This means that all available information that bears on the determination of reproductive toxicity is considered together. Included is information such as epidemiological studies and case reports in humans and specific reproduction studies along with sub-chronic, chronic and special study results in animals that provide relevant information regarding toxicity to reproductive and related endocrine organs. Evaluation of substances chemically related to the material under study may also be included, particularly when information on the material is scarce. The weight given to the available evidence will be influenced by factors such as the quality of the studies, consistency of results, nature and severity of effects, level of statistical significance for intergroup differences, number of endpoints affected, relevance of route of administration to humans and freedom from bias. Both positive and negative results are considered together in a weight of evidence determination. However, a single, positive study performed according to good scientific principles and with statistically or biologically significant positive results may justify classification (See also A.7.2.2.3).

A.7.2.3.2 Toxicokinetic studies in animals and humans, site of action and mechanism or mode of action study results may provide relevant information, which could reduce or increase concerns about the hazard to human health. If it is conclusively demonstrated that the clearly identified mechanism or mode of action has no relevance for humans or when the toxicokinetic differences are so marked that it is certain that the hazardous property will not be expressed in humans then a chemical which produces an adverse effect on reproduction in experimental animals should not be classified.

A.7.2.3.3 In some reproductive toxicity studies in experimental animals the only effects recorded may be considered of low or minimal toxicological significance and classification may not necessarily be the outcome. These effects include, for example, small changes in semen parameters or in the incidence of spontaneous defects in the fetus, small changes in the proportions of common fetal variants such as are observed in skeletal examinations, or in fetal weights, or small differences in postnatal developmental assessments.

A.7.2.3.4 Data from animal studies shall provide sufficient evidence of specific reproductive toxicity in the absence of other systemic toxic effects. However, if developmental toxicity occurs together with other toxic effects in the dam (mother), the potential influence of the generalized adverse effects should be assessed to the extent possible. The preferred approach is to consider adverse effects in the embryo/fetus first, and then evaluate maternal toxicity, along with any other factors which are likely to have influenced these effects, as part of the weight of evidence. In general, developmental effects that are observed at maternally toxic doses should not be automatically discounted. Discounting developmental effects that are observed at maternally toxic doses can only be done on a case-by-case basis when a causal relationship is established or refuted.

A.7.2.3.5 If appropriate information is available it is important to try to determine whether developmental toxicity is due to a specific maternally mediated mechanism or to a non-specific secondary mechanism, like maternal stress and the disruption of homeostasis. Generally, the presence of maternal toxicity should not be used to negate findings of embryo/fetal effects, unless it can be clearly demonstrated that the effects are secondary non-specific effects. This is especially the case when the effects in the offspring are significant, e.g., irreversible effects such as structural malformations. In some situations it is reasonable to assume that reproductive toxicity is due to a secondary consequence of maternal toxicity and discount the effects, for example if the chemical is so toxic that dams fail to thrive and there is severe inanition; they are incapable of nursing pups; or they are prostrate or dying.

A.7.2.4 Maternal Toxicity

A.7.2.4.1 Development of the offspring throughout gestation and during the early postnatal stages can be influenced by toxic effects in the mother either through non-specific mechanisms related to stress and the disruption of maternal homeostasis, or by specific maternally-mediated mechanisms. So, in the interpretation of the developmental outcome to decide classification for developmental effects it is important to consider the possible influence of maternal toxicity. This is a complex issue because of uncertainties surrounding the relationship between maternal toxicity and developmental outcome. Expert judgment and a weight of evidence approach, using all available studies, shall be used to determine the degree of influence to be attributed to maternal toxicity when interpreting the criteria for classification for developmental effects. The adverse effects in the embryo/fetus shall be first considered, and then maternal toxicity, along with any other factors which are likely to have influenced these effects, as weight of evidence, to help reach a conclusion about classification.

A.7.2.4.2 Based on pragmatic observation, it is believed that maternal toxicity may, depending on severity, influence development via non-specific secondary mechanisms, producing effects such as depressed fetal weight, retarded ossification, and possibly resorptions and certain malformations in some strains of certain species. However, the limited numbers of studies which have investigated the relationship between developmental effects and general maternal toxicity have failed to demonstrate a consistent, reproducible relationship across species. Developmental effects which occur even in the presence of maternal toxicity are considered to be evidence of developmental toxicity, unless it can be unequivocally demonstrated on a case by case basis that the developmental effects are secondary to maternal toxicity. Moreover, classification shall be considered where there is a significant toxic effect in the offspring, e.g., irreversible effects such as structural malformations, embryo/fetal lethality, or significant post-natal functional deficiencies.

A.7.2.4.3 Classification shall not automatically be discounted for chemicals that produce developmental toxicity only in association with maternal toxicity, even if a specific maternally-mediated mechanism has been demonstrated. In such a case, classification in Category 2 may be considered more appropriate than Category 1. However, when a chemical is so toxic that maternal death or severe inanition results, or the dams (mothers) are prostrate and incapable of nursing the pups, it is reasonable to assume that developmental toxicity is produced solely as a secondary consequence of maternal toxicity and discount the developmental effects.

Classification is not necessarily the outcome in the case of minor developmental changes, e.g., a small reduction in fetal/pup body weight or retardation of ossification when seen in association with maternal toxicity.

A.7.2.4.4 Some of the endpoints used to assess maternal toxicity are provided below. Data on these endpoints, if available, shall be evaluated in light of their statistical or biological significance and dose-response relationship.

(a) Maternal mortality: An increased incidence of mortality among the treated dams over the controls shall be considered evidence of maternal toxicity if the increase occurs in a dose-related manner and can be attributed to the systemic toxicity of the test material. Maternal mortality greater than 10% is considered excessive and the data for that dose level shall not normally be considered to need further evaluation.

(b) Mating index (Number of animals with seminal plugs or sperm/Number of mated × 100)

(c) Fertility index (Number of animals with implants/Number of matings × 100)

(d) Gestation length (If allowed to deliver)

(e) Body weight and body weight change: Consideration of the maternal body weight change and/or adjusted (corrected) maternal body weight shall be included in the evaluation of maternal toxicity whenever such data are available. The calculation of an adjusted (corrected) mean maternal body weight change, which is the difference between the initial and terminal body weight minus the gravid uterine weight (or alternatively, the sum of the weights of the fetuses), may indicate whether the effect is maternal or intrauterine. In rabbits, the body weight gain may not be a useful indicator of maternal toxicity because of normal fluctuations in body weight during pregnancy.

(f) Food and water consumption (if relevant): The observation of a significant decrease in the average food or water consumption in treated dams (mothers) compared to the control group may be useful in evaluating maternal toxicity, particularly when the test material is administered in the diet or drinking water. Changes in food or water consumption must be evaluated in conjunction with maternal body weights when determining if the effects noted are reflective of maternal toxicity or more simply, unpalatability of the test material in feed or water.

(g) Clinical evaluations (including clinical signs, markers, and hematology and clinical chemistry studies): The observation of increased incidence of significant clinical signs of toxicity in treated dams (mothers) relative to the control group is useful in evaluating maternal toxicity. If this is to be used as the basis for the assessment of maternal toxicity, the types, incidence, degree and duration of clinical signs shall be reported in the study. Clinical signs of maternal intoxication include, but are not limited to: coma, prostration, hyperactivity, loss of righting reflex, ataxia, or labored breathing.

(h) Post-mortem data: Increased incidence and/or severity of post-mortem findings may be indicative of maternal toxicity. This can include gross or microscopic pathological findings or organ weight data, including absolute organ weight, organ-to-body weight ratio, or organ-to-brain weight ratio. When supported by findings of adverse histopathological effects in the affected organ(s), the observation of a significant change in the average weight of suspected target organ(s) of treated dams (mothers), compared to those in the control group, may be considered evidence of maternal toxicity.

A.7.2.5 Animal and Experimental Data

A.7.2.5.1 A number of scientifically validated test methods are available, including methods for developmental toxicity testing (e.g., OECD Test Guideline 414, ICH Guideline S5A, 1993), methods for peri- and post-natal toxicity testing (e.g., ICH S5B, 1995), and methods for one or two-generation toxicity testing (e.g., OECD Test Guidelines 415, 416)

A.7.2.5.2 Results obtained from screening tests (e.g., OECD Guidelines 421—Reproduction/Developmental Toxicity Screening Test, and 422—Combined Repeated Dose Toxicity Study with Reproduction/Development Toxicity Screening Test) can also be used to justify classification, although the quality of this evidence is less reliable than that obtained through full studies.

A.7.2.5.3 Adverse effects or changes, seen in short- or long-term repeated dose toxicity studies, which are judged likely to impair reproductive function and which occur in the absence of significant generalized toxicity, may be used as a basis for classification, e.g., histopathological changes in the gonads.

A.7.2.5.4 Evidence from *in vitro* assays, or non-mammalian tests, and from analogous substances using structure-activity relationship (SAR), can contribute to the procedure for classification. In all cases of this nature, expert judgment must be used to assess the adequacy of the data. Inadequate data shall not be used as a primary support for classification.

A.7.2.5.5 It is preferable that animal studies are conducted using appropriate routes of administration which relate to the potential route of human exposure. However, in practice, reproductive toxicity studies are commonly conducted using the oral route, and such studies will normally be suitable for evaluating the hazardous properties of the substance with respect to reproductive toxicity. However, if it can be conclusively demonstrated that the clearly identified mechanism or mode of action has no relevance for humans or when the toxicokinetic differences are so marked that it is certain that the hazardous property will not be expressed in humans then a substance which produces an adverse effect on reproduction in experimental animals should not be classified.

A.7.2.5.6 Studies involving routes of administration such as intravenous or intraperitoneal injection, which may result in exposure of the reproductive organs to unrealistically high levels of the test substance, or elicit local damage to the reproductive organs, e.g., by irritation, must be interpreted with extreme caution and on their own are not normally the basis for classification.

A.7.2.5.7 There is general agreement about the concept of a limit dose, above which the production of an adverse effect may be considered to be outside the criteria which lead to classification. Some test guidelines specify a limit dose, other test guidelines qualify the limit dose with a statement that higher doses may be necessary if anticipated human exposure is sufficiently high that an adequate margin of exposure would not be achieved. Also, due to species differences in toxicokinetics, establishing a specific limit dose may not be adequate for situations where humans are more sensitive than the animal model.

A.7.2.5.8 In principle, adverse effects on reproduction seen only at very high dose levels in animal studies (for example doses that induce prostration, severe inappetence, excessive mortality) do not normally lead to classification, unless other information is available, for example, toxicokinetics information indicating that humans may be more susceptible than animals, to suggest that classification is appropriate.

A.7.2.5.9 However, specification of the actual ''limit dose'' will depend upon the test method that has been employed to provide the test results.

A.7.3 Classification Criteria for Mixtures [9]

A.7.3.1 Classification of Mixtures When Data Are Available for All Ingredients or Only for Some Ingredients of the Mixture

A.7.3.1.1 The mixture shall be classified as a reproductive toxicant when at least one ingredient has been classified as a Category 1 or Category 2 reproductive toxicant and is present at or above the appropriate cut-off value/concentration limit specified in Table A.7.1 for Category 1 and 2, respectively.

A.7.3.1.2 The mixture shall be classified for effects on or via lactation when at least one ingredient has been classified for effects on or via lactation and is present at or above the appropriate cut-off value/concentration limit specified in Table A.7.1 for the additional category for effects on or via lactation.

[9] *It should be noted that the classification criteria for health hazards usually include a tiered scheme in which test data available on the complete mixture are considered as the first tier in the evaluation, followed by the applicable bridging principles, and lastly, cut-off values/concentration limits or additivity. However, this approach is not used for Reproductive Toxicity. These criteria for Reproductive Toxicity consider the cut-off values/concentration limits as the primary tier and allow the classification to be modified only on a case-by-case evaluation based on available test data for the mixture as a whole.*

TABLE A.7.1—CUT-OFF VALUES/CONCENTRATION LIMITS OF INGREDIENTS OF A MIXTURE CLASSIFIED AS REPRODUCTIVE TOXICANTS OR FOR EFFECTS ON OR VIA LACTATION THAT TRIGGER CLASSIFICATION OF THE MIXTURE

Ingredients classified as:	Cut-off values/concentration limits triggering classification of a mixture as:		
	Category 1 reproductive toxicant	Category 2 reproductive toxicant	Additional category for effects on or via lactation
Category 1 reproductive toxicant	≥0.1%		
Category 2 reproductive toxicant		≥0.1%	
Additional category for effects on or via lactation			≥0.1%

A.7.3.2 Classification of Mixtures When Data Are Available for the Complete Mixture

Available test data for the mixture as a whole may be used for classification on a case-by-case basis. In such cases, the test results for the mixture as a whole must be shown to be conclusive taking into account dose and other factors such as duration, observations and analysis (e.g., statistical analysis, test sensitivity) of reproduction test systems.

A.7.3.3 Classification of Mixtures When Data Are Not Available for the Complete Mixture: Bridging Principles

A.7.3.3.1 Where the mixture itself has not been tested to determine its reproductive toxicity, but there are sufficient data on both the individual ingredients and similar tested mixtures to adequately characterize the hazards of the mixture, these data shall be used in accordance with the following bridging principles as found in paragraph A.0.5 of this Appendix: Dilution, Batching, and Substantially similar mixtures.

A.8 SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE

A.8.1 Definitions and General Considerations

A.8.1.1 *Specific target organ toxicity—single exposure, (STOT–SE)* means specific, non-lethal target organ toxicity arising from a single exposure to a chemical. All significant health effects that can impair function, both reversible and irreversible, immediate and/or delayed and not specifically addressed in A.1 to A.7 and A.10 of this Appendix are included. Specific target organ toxicity following repeated exposure is classified in accordance with *SPECIFIC TARGET ORGAN TOXICITY—REPEATED EXPOSURE* (A.9 of this Appendix) and is therefore not included here.

A.8.1.2 Classification identifies the chemical as being a specific target organ toxicant and, as such, it presents a potential for adverse health effects in people who are exposed to it.

A.8.1.3 The adverse health effects produced by a single exposure include consistent and identifiable toxic effects in humans; or, in experimental animals, toxicologically significant changes which have affected the function or morphology of a tissue/organ, or have produced serious changes to the biochemistry or hematology of the organism, and these changes are relevant for human health. Human data is the primary source of evidence for this hazard class.

A.8.1.4 Assessment shall take into consideration not only significant changes in a single organ or biological system but also generalized changes of a less severe nature involving several organs.

A.8.1.5 Specific target organ toxicity can occur by any route that is relevant for humans, i.e., principally oral, dermal or inhalation.

A.8.1.6 The classification criteria for specific organ systemic toxicity single exposure are organized as criteria for substances Categories 1 and 2 (See A.8.2.1), criteria for substances Category 3 (See A.8.2.2) and criteria for mixtures (See A.8.3). See also Figure A.8.1.

A.8.2 Classification Criteria for Substances

A.8.2.1 Substances of Category 1 and Category 2

A.8.2.1.1 Substances shall be classified for immediate or delayed effects separately, by the use of expert judgment on the basis of the weight of all evidence available, including the use of recommended guidance values (See A.8.2.1.9). Substances shall then be classified in Category 1 or 2, depending upon the nature and severity of the effect(s) observed, in accordance with Figure A.8.1.

FIGURE A.8.1—HAZARD CATEGORIES FOR SPECIFIC TARGET ORGAN TOXICITY FOLLOWING SINGLE EXPOSURE

CATEGORY 1: Substances that have produced significant toxicity in humans, or that, on the basis of evidence from studies in experimental animals can be presumed to have the potential to produce significant toxicity in humans following single exposure

Substances are classified in Category 1 for STOT–SE on the basis of:

(a) reliable and good quality evidence from human cases or epidemiological studies; or

(b) observations from appropriate studies in experimental animals in which significant and/or severe toxic effects of relevance to human health were produced at generally low exposure concentrations. Guidance dose/concentration values are provided below (See A.8.2.1.9) to be used as part of weight-of-evidence evaluation.

CATEGORY 2: Substances that, on the basis of evidence from studies in experimental animals, can be presumed to have the potential to be harmful to human health following single exposure

Substances are classified in Category 2 for STOT–SE on the basis of observations from appropriate studies in experimental animals in which significant toxic effects, of relevance to human health, were produced at generally moderate exposure concentrations. Guidance dose/concentration values are provided below (See A.8.2.1.9) in order to help in classification.

In exceptional cases, human evidence can also be used to place a substance in Category 2 (See A.8.2.1.6).

CATEGORY 3: Transient target organ effects

There are target organ effects for which a substance does not meet the criteria to be classified in Categories 1 or 2 indicated above. These are effects which adversely alter human function for a short duration after exposure and from which humans may recover in a reasonable period without leaving significant alteration of structure or function. This category only includes narcotic effects and respiratory tract irritation. Substances are classified specifically for these effects as discussed in A.8.2.2.

Note: The primary target organ/system shall be identified where possible, and where this is not possible, the substance shall be identified as a general toxicant. The data shall be evaluated and, where possible, shall not include secondary effects (e.g., a hepatotoxicant can produce secondary effects in the nervous or gastro-intestinal systems).

A.8.2.1.2 The relevant route(s) of exposure by which the classified substance produces damage shall be identified.

A.8.2.1.3 Classification is determined by expert judgment, on the basis of the weight of all evidence available including the guidance presented below.

A.8.2.1.4 Weight of evidence of all available data, including human incidents, epidemiology, and studies conducted in experimental animals is used to substantiate specific target organ toxic effects that merit classification.

A.8.2.1.5 The information required to evaluate specific target organ toxicity comes either from single exposure in humans (e.g., exposure at home, in the workplace or environmentally), or from studies conducted in experimental animals. The standard animal studies in rats or mice that provide this information are acute toxicity studies which can include clinical observations and detailed macroscopic and microscopic examination to enable the toxic effects on target tissues/organs to be identified. Results of acute toxicity studies conducted in other species may also provide relevant information.

A.8.2.1.6 In exceptional cases, based on expert judgment, it may be appropriate to place certain substances with human evidence of target organ toxicity in Category 2: (a) when the weight of human evidence is not sufficiently convincing to warrant Category 1 classification, and/or (b) based on the nature and severity of effects. Dose/concentration levels in humans shall not be considered in the classification and any available evidence from animal studies shall be consistent with the Category 2 classification. In other words, if there are also animal data available on the substance that warrant Category 1 classification, the chemical shall be classified as Category 1.

A.8.2.1.7 Effects considered to support classification for Category 1 and 2

A.8.2.1.7.1 Classification is supported by evidence associating single exposure to the substance with a consistent and identifiable toxic effect.

A.8.2.1.7.2 Evidence from human experience/incidents is usually restricted to reports of adverse health consequences, often with uncertainty about exposure conditions, and may not provide the scientific detail that can be obtained from well-conducted studies in experimental animals.

A.8.2.1.7.3 Evidence from appropriate studies in experimental animals can furnish much more detail, in the form of clinical observations, and macroscopic and microscopic pathological examination and this can often reveal hazards that may not be life-threatening but could indicate functional impairment. Consequently all available evidence, and evidence relevance to human health, must be taken into consideration in the classification process. Relevant toxic effects in humans and/or animals include, but are not limited to:

(a) Morbidity resulting from single exposure;

(b) Significant functional changes, more than transient in nature, in the respiratory system, central or peripheral nervous systems, other organs or other organ systems, including signs of central nervous system depression and effects on special senses (e.g., sight, hearing and sense of smell);

(c) Any consistent and significant adverse change in clinical biochemistry, hematology, or urinalysis parameters;

(d) Significant organ damage that may be noted at necropsy and/or subsequently seen or confirmed at microscopic examination;

(e) Multi-focal or diffuse necrosis, fibrosis or granuloma formation in vital organs with regenerative capacity;

(f) Morphological changes that are potentially reversible but provide clear evidence of marked organ dysfunction; and,

(g) Evidence of appreciable cell death (including cell degeneration and reduced cell number) in vital organs incapable of regeneration.

A.8.2.1.8 Effects considered not to support classification for Category 1 and 2

Effects may be seen in humans and/or animals that do not justify classification. Such effects include, but are not limited to:

(a) Clinical observations or small changes in bodyweight gain, food consumption or water intake that may have some toxicological importance but that do not, by themselves, indicate ''significant'' toxicity;

(b) Small changes in clinical biochemistry, hematology or urinalysis parameters and/or transient effects, when such changes or effects are of doubtful or of minimal toxicological importance;

(c) Changes in organ weights with no evidence of organ dysfunction;

(d) Adaptive responses that are not considered toxicologically relevant; and,

(e) Substance-induced species-specific mechanisms of toxicity, i.e., demonstrated with reasonable certainty to be not relevant for human health, shall not justify classification.

A.8.2.1.9 Guidance values to assist with classification based on the results obtained from studies conducted in experimental animals for Category 1 and 2

A.8.2.1.9.1 In order to help reach a decision about whether a substance shall be classified or not, and to what degree it shall be classified (Category 1 vs. Category 2), dose/concentration ''guidance values'' are provided for consideration of the dose/concentration which has been shown to produce significant health effects. The principal argument for proposing such guidance values is that all chemicals are potentially toxic and there has to be a reasonable dose/concentration above which a degree of toxic effect is acknowledged.

A.8.2.1.9.2 Thus, in animal studies, when significant toxic effects are observed that indicate classification, consideration of the dose/concentration at which these effects were seen, in relation to the suggested guidance values, provides useful information to help assess the need to classify (since the toxic effects are a consequence of the hazardous property(ies) and also the dose/concentration).

A.8.2.1.9.3 The guidance value (C) ranges for single-dose exposure which has produced a significant non-lethal toxic effect are those applicable to acute toxicity testing, as indicated in Table A.8.1.

TABLE A.8.1—GUIDANCE VALUE RANGES FOR SINGLE-DOSE EXPOSURES

Route of exposure	Units	Guidance value ranges for:		
		Category 1	Category 2	Category 3
Oral (rat)	mg/kg body weight	C ≤300	2000 ≥C >300	Guidance values do not apply.
Dermal (rat or rabbit)	mg/kg body weight	C ≤1,000	2000 ≥C >1,000.	
Inhalation (rat) gas	ppmV/4h	C ≤2,500	20,000 ≥C >2,500.	
Inhalation (rat) vapor	mg/1/4h	C ≤10	20 ≥C >10.	
Inhalation (rat) dust/mist/fume.	mg/l/4h	C ≤1.0	5.0 ≥C >1.0.	

A.8.2.1.9.4 The guidance values and ranges mentioned in Table A.8.1 are intended only for guidance purposes, i.e., to be used as part of the weight of evidence approach, and to assist with decisions about classification. They are not intended as strict demarcation values. Guidance values are not provided for Category 3 since this classification is primarily based on human data; animal data may be included in the weight of evidence evaluation.

A.8.2.1.9.5 Thus, it is feasible that a specific profile of toxicity occurs at a dose/concentration below the guidance value, e.g., <2000 mg/kg body weight by the oral route, however the nature of the effect may result in the decision not to classify. Conversely, a specific profile of toxicity may be seen in animal studies occurring at above a guidance value, e.g., ≥2000 mg/kg body weight by the oral route, and in addition there is supplementary information from other sources, e.g., other single dose studies, or human case experience, which supports a conclusion that, in view of the weight of evidence, classification is the prudent action to take.

A.8.2.1.10 Other considerations

A.8.2.1.10.1 When a substance is characterized only by use of animal data the classification process includes reference to dose/concentration guidance values as one of

the elements that contribute to the weight of evidence approach.

A.8.2.1.10.2 When well-substantiated human data are available showing a specific target organ toxic effect that can be reliably attributed to single exposure to a substance, the substance shall be classified. Positive human data, regardless of probable dose, predominates over animal data. Thus, if a substance is unclassified because specific target organ toxicity observed was considered not relevant or significant to humans, if subsequent human incident data become available showing a specific target organ toxic effect, the substance shall be classified.

A.8.2.1.10.3 A substance that has not been tested for specific target organ toxicity shall, where appropriate, be classified on the basis of data from a scientifically validated structure activity relationship and expert judgment-based extrapolation from a structural analogue that has previously been classified together with substantial support from consideration of other important factors such as formation of common significant metabolites.

A.8.2.2 Substances of Category 3

A.8.2.2.1 Criteria for respiratory tract irritation

The criteria for classifying substances as Category 3 for respiratory tract irritation are:

(a) Respiratory irritant effects (characterized by localized redness, edema, pruritis and/or pain) that impair function with symptoms such as cough, pain, choking, and breathing difficulties are included. It is recognized that this evaluation is based primarily on human data;

(b) Subjective human observations supported by objective measurements of clear respiratory tract irritation (RTI) (e.g., electrophysiological responses, biomarkers of inflammation in nasal or bronchoalveolar lavage fluids);

(c) The symptoms observed in humans shall also be typical of those that would be produced in the exposed population rather than being an isolated idiosyncratic reaction or response triggered only in individuals with hypersensitive airways. Ambiguous reports simply of ''irritation'' should be excluded as this term is commonly used to describe a wide range of sensations including those such as smell, unpleasant taste, a tickling sensation, and dryness, which are outside the scope of classification for respiratory tract irritation;

(d) There are currently no scientifically validated animal tests that deal specifically with RTI; however, useful information may be obtained from the single and repeated inhalation toxicity tests. For example, animal studies may provide useful information in terms of clinical signs of toxicity (dyspnoea, rhinitis etc) and histopathology (e.g., hyperemia, edema, minimal inflammation, thickened mucous layer) which are reversible and may be reflective of the characteristic clinical symptoms described above. Such animal studies can be used as part of weight of evidence evaluation; and,

(e) This special classification will occur only when more severe organ effects including the respiratory system are not observed as those effects would require a higher classification.

A.8.2.2.2 Criteria for narcotic effects

The criteria for classifying substances in Category 3 for narcotic effects are:

(a) Central nervous system depression including narcotic effects in humans such as drowsiness, narcosis, reduced alertness, loss of reflexes, lack of coordination, and vertigo are included. These effects can also be manifested as severe headache or nausea, and can lead to reduced judgment, dizziness, irritability, fatigue, impaired memory function, deficits in perception and coordination, reaction time, or sleepiness; and,

(b) Narcotic effects observed in animal studies may include lethargy, lack of coordination righting reflex, narcosis, and ataxia. If these effects are not transient in nature, then they shall be considered for classification as Category 1 or 2.

A.8.3 Classification Criteria for Mixtures

A.8.3.1 Mixtures are classified using the same criteria as for substances, or alternatively as described below. As with substances, mixtures may be classified for specific target organ toxicity following single exposure, repeated exposure, or both.

A.8.3.2 Classification of Mixtures When Data Are Available for the Complete Mixture

When reliable and good quality evidence from human experience or appropriate studies in experimental animals, as described in the criteria for substances, is available for the mixture, then the mixture shall be classified by weight of evidence evaluation of this data. Care shall be exercised in evaluating data on mixtures, that the dose, duration, observation or analysis, do not render the results inconclusive.

A.8.3.3 Classification of Mixtures When Data Are Not Available for the Complete Mixture: Bridging Principles

A.8.3.3.1 Where the mixture itself has not been tested to determine its specific target organ toxicity, but there are sufficient data on both the individual ingredients and similar tested mixtures to adequately characterize the hazards of the mixture, these data shall be used in accordance with the following bridging principles as found in paragraph A.0.5 of this Appendix: Dilution, Batching, Concentration of mixtures, Interpolation within one toxicity category, Substantially similar mixtures, or Aerosols.

A.8.3.4 Classification of Mixtures When Data Are Available for All Ingredients or Only for Some Ingredients of the Mixture

A.8.3.4.1 Where there is no reliable evidence or test data for the specific mixture itself, and the bridging principles cannot be used to enable classification, then classification of the mixture is based on the classification of the ingredient substances. In this case, the mixture shall be classified as a specific target organ toxicant (specific organ specified), following single exposure, repeated exposure, or both when at least one ingredient has been classified as a Category 1 or Category 2 specific target organ toxicant and is present at or above the appropriate cut-off value/concentration limit specified in Table A.8.2 for Categories 1 and 2, respectively.

TABLE A.8.2—CUT-OFF VALUES/CONCENTRATION LIMITS OF INGREDIENTS OF A MIXTURE CLASSIFIED AS A SPECIFIC TARGET ORGAN TOXICANT THAT WOULD TRIGGER CLASSIFICATION OF THE MIXTURE AS CATEGORY 1 OR 2

Ingredient classified as:	Cut-off values/concentration limits triggering classification of a mixture as:	
	Category 1	Category 2
Category 1 Target organ toxicant	≥1.0%	
Category 2 Target organ toxicant		≥1.0%

A.8.3.4.2 These cut-off values and consequent classifications shall be applied equally and appropriately to both single- and repeated-dose target organ toxicants.

A.8.3.4.3 Mixtures shall be classified for either or both single and repeated dose toxicity independently.

A.8.3.4.4 Care shall be exercised when toxicants affecting more than one organ system are combined that the potentiation or synergistic interactions are considered, because certain substances can cause target organ toxicity at <1% concentration when other ingredients in the mixture are known to potentiate its toxic effect.

A.8.3.4.5 Care shall be exercised when extrapolating the toxicity of a mixture that contains Category 3 ingredient(s). A cut-off value/concentration limit of 20%, considered as an additive of all Category 3 ingredients for each hazard endpoint, is appropriate; however, this cut-off value/concentration limit may be higher or lower depending on the Category 3 ingredient(s) involved and the fact that some effects such as respiratory tract irritation may not occur below a certain concentration while other effects such as narcotic effects may occur below this 20% value. Expert judgment shall be exercised. Respiratory tract irritation and narcotic

effects are to be evaluated separately in accordance with the criteria given in A.8.2.2. When conducting classifications for these hazards, the contribution of each ingredient should be considered additive, unless there is evidence that the effects are not additive.

A.9 SPECIFIC TARGET ORGAN TOXICITY REPEATED OR PROLONGED EXPOSURE

A.9.1 Definitions and general considerations

A.9.1.1 *Specific target organ toxicity—repeated exposure (STOT–RE)* means specific target organ toxicity arising from repeated exposure to a substance or mixture. All significant health effects that can impair function, both reversible and irreversible, immediate and/or delayed and not specifically addressed in A.1 to A.7 and A.10 of this Appendix are included. Specific target organ toxicity following a single-event exposure is classified in accordance with *SPECIFIC TARGET ORGAN TOXICITY—SINGLE EXPOSURE* (A.8 of this Appendix) and is therefore not included here.

A.9.1.2 Classification identifies the substance or mixture as being a specific target organ toxicant and, as such, it may present a potential for adverse health effects in people who are exposed to it.

A.9.1.3 These adverse health effects produced by repeated exposure include consistent and identifiable toxic effects in humans, or, in experimental animals, toxicologically significant changes which have affected the function or morphology of a tissue/organ, or have produced serious changes to the biochemistry or hematology of the organism and these changes are relevant for human health. Human data will be the primary source of evidence for this hazard class.

A.9.1.4 Assessment shall take into consideration not only significant changes in a single organ or biological system but also generalized changes of a less severe nature involving several organs.

A.9.1.5 Specific target organ toxicity can occur by any route that is relevant for humans, e.g., principally oral, dermal or inhalation.

A.9.2 Classification Criteria for Substances

A.9.2.1 Substances shall be classified as STOT–RE by expert judgment on the basis of the weight of all evidence available, including the use of recommended guidance values which take into account the duration of exposure and the dose/concentration which produced the effect(s), (See A.9.2.9). Substances shall be placed in one of two categories, depending upon the nature and severity of the effect(s) observed, in accordance with Figure A.9.1.

FIGURE A.9.1—HAZARD CATEGORIES FOR SPECIFIC TARGET ORGAN TOXICITY FOLLOWING REPEATED EXPOSURE

CATEGORY 1: Substances that have produced significant toxicity in humans, or that, on the basis of evidence from studies in experimental animals can be presumed to have the potential to produce significant toxicity in humans following repeated or prolonged exposure

Substances are classified in Category 1 for specific target organ toxicity (repeated exposure) on the basis of:

(a) reliable and good quality evidence from human cases or epidemiological studies; or,

(b) observations from appropriate studies in experimental animals in which significant and/or severe toxic effects, of relevance to human health, were produced at generally low exposure concentrations. Guidance dose/concentration values are provided below (See A.9.2.9) to be used as part of weight-of-evidence evaluation.

CATEGORY 2: Substances that, on the basis of evidence from studies in experimental animals can be presumed to have the potential to be harmful to human health following repeated or prolonged exposure

Substances are classified in Category 2 for specific target organ toxicity (repeated exposure) on the basis of observations from appropriate studies in experimental animals in which significant toxic effects, of relevance to human health, were produced at generally moderate exposure concentrations. Guidance dose/concentration values are provided below (See A.9.2.9) in order to help in classification.

In exceptional cases human evidence can also be used to place a substance in Category 2 (See A.9.2.6).

Note: The primary target organ/system shall be identified where possible, or the substance shall be identified as a general toxicant. The data shall be carefully evaluated and, where possible, shall not include secondary effects (e.g., a hepatotoxicant can produce secondary effects in the nervous or gastro-intestinal systems).

A.9.2.2 The relevant route of exposure by which the classified substance produces damage shall be identified.

A.9.2.3 Classification is determined by expert judgment, on the basis of the weight of all evidence available including the guidance presented below.

A.9.2.4 Weight of evidence of all data, including human incidents, epidemiology, and studies conducted in experimental animals, is used to substantiate specific target organ toxic effects that merit classification.

A.9.2.5 The information required to evaluate specific target organ toxicity comes either from repeated exposure in humans, e.g., exposure at home, in the workplace or environmentally, or from studies conducted in experimental animals. The standard animal studies in rats or mice that provide this information are 28 day, 90 day or lifetime studies (up to 2 years) that include hematological, clinico-chemical and detailed macroscopic and microscopic examination to enable the toxic effects on target tissues/organs to be identified. Data from repeat dose studies performed in other species may also be used. Other long-term exposure studies, e.g., for carcinogenicity, neurotoxicity or reproductive toxicity, may also provide evidence of specific target organ toxicity that could be used in the assessment of classification.

A.9.2.6 In exceptional cases, based on expert judgment, it may be appropriate to place certain substances with human evidence of specific target organ toxicity in Category 2: (a) when the weight of human evidence is not sufficiently convincing to warrant Category 1 classification, and/or (b) based on the nature and severity of effects. Dose/concentration levels in humans shall not be considered in the classification and any available evidence from animal studies shall be consistent with the Category 2 classification. In other words, if there are also animal data available on the substance that warrant Category 1 classification, the substance shall be classified as Category 1.

A.9.2.7 Effects Considered To Support Classification

A.9.2.7.1 Classification is supported by reliable evidence associating repeated exposure to the substance with a consistent and identifiable toxic effect.

A.9.2.7.2 Evidence from human experience/incidents is usually restricted to reports of adverse health consequences, often with uncertainty about exposure conditions, and may not provide the scientific detail that can be obtained from well-conducted studies in experimental animals.

A.9.2.7.3 Evidence from appropriate studies in experimental animals can furnish much more detail, in the form of clinical observations, hematology, clinical chemistry, macroscopic and microscopic pathological examination and this can often reveal hazards that may not be life-threatening but could indicate functional impairment. Consequently all available evidence, and relevance to human health, must be taken into consideration in the classification process. Relevant toxic effects in humans and/or animals include, but are not limited to:

(a) Morbidity or death resulting from repeated or long-term exposure. Morbidity or death may result from repeated exposure, even to relatively low doses/concentrations, due to bioaccumulation of the substance or its metabolites, or due to the overwhelming of the de-toxification process by repeated exposure;

(b) Significant functional changes in the central or peripheral nervous systems or other organ systems, including signs of central nervous system depression and effects on special senses (e.g., sight, hearing and sense of smell);

(c) Any consistent and significant adverse change in clinical biochemistry, hematology, or urinalysis parameters;

(d) Significant organ damage that may be noted at necropsy and/or subsequently seen or confirmed at microscopic examination;

(e) Multi-focal or diffuse necrosis, fibrosis or granuloma formation in vital organs with regenerative capacity;

(f) Morphological changes that are potentially reversible but provide clear evidence of marked organ dysfunction (e.g., severe fatty change in the liver); and,

(g) Evidence of appreciable cell death (including cell degeneration and reduced cell number) in vital organs incapable of regeneration.

A.9.2.8 Effects Considered Not To Support Classification

Effects may be seen in humans and/or animals that do not justify classification. Such effects include, but are not limited to:

(a) Clinical observations or small changes in bodyweight gain, food consumption or water intake that may have some toxicological importance but that do not, by themselves, indicate ''significant'' toxicity;

(b) Small changes in clinical biochemistry, hematology or urinalysis parameters and/or transient effects, when such changes or effects are of doubtful or of minimal toxicological importance;

(c) Changes in organ weights with no evidence of organ dysfunction;

(d) Adaptive responses that are not considered toxicologically relevant;

(e) Substance-induced species-specific mechanisms of toxicity, i.e., demonstrated with reasonable certainty to be not relevant for human health, shall not justify classification.

A.9.2.9 Guidance Values To Assist With Classification Based on the Results Obtained From Studies Conducted in Experimental Animals

A.9.2.9.1 In studies conducted in experimental animals, reliance on observation of effects alone, without reference to the duration of experimental exposure and dose/concentration, omits a fundamental concept of toxicology, i.e., all substances are potentially toxic, and what determines the toxicity is a function of the dose/concentration and the duration of exposure. In most studies conducted in experimental animals the test guidelines use an upper limit dose value.

A.9.2.9.2 In order to help reach a decision about whether a substance shall be classified or not, and to what degree it shall be classified (Category 1 vs. Category 2), dose/concentration ''guidance values'' are provided in Table A.9.1 for consideration of the dose/concentration which has been shown to produce significant health effects. The principal argument for proposing such guidance values is that all chemicals are potentially toxic and there has to be a reasonable dose/concentration above which a degree of toxic effect is acknowledged. Also, repeated-dose studies conducted in experimental animals are designed to produce toxicity at the highest dose used in order to optimize the test objective and so most studies will reveal some toxic effect at least at this highest dose. What is therefore to be decided is not only what effects have been produced, but also at what dose/concentration they were produced and how relevant is that for humans.

A.9.2.9.3 Thus, in animal studies, when significant toxic effects are observed that indicate classification, consideration of the duration of experimental exposure and the dose/concentration at which these effects were seen, in relation to the suggested guidance values, provides useful information to help assess the need to classify (since the toxic effects are a consequence of the hazardous property(ies) and also the duration of exposure and the dose/concentration).

A.9.2.9.4 The decision to classify at all can be influenced by reference to the dose/concentration guidance values at or below which a significant toxic effect has been observed.

A.9.2.9.5 The guidance values refer to effects seen in a standard 90-day toxicity study conducted in rats. They can be used as a basis to extrapolate equivalent guidance values for toxicity studies of greater or lesser duration, using dose/exposure time extrapolation similar to Haber's rule for inhalation, which states essentially that the effective dose is directly proportional to the exposure concentration and the duration of exposure. The assessment should be done on a case-by-case basis; for example, for a 28-day study the guidance values below would be increased by a factor of three.

A.9.2.9.6 Thus for Category 1 classification, significant toxic effects observed in a 90-day repeated-dose study conducted in experimental animals and seen to occur at or below the (suggested) guidance values (C) as indicated in Table A.9.1 would justify classification:

TABLE A.9.1—GUIDANCE VALUES TO ASSIST IN CATEGORY 1 CLASSIFICATION

[Applicable to a 90-day study]

Route of exposure	Units	Guidance values (dose/concentration)
Oral (rat)	mg/kg body weight/day	C ≤10.
Dermal (rat or rabbit)	mg/kg body weight/day	C ≤20.
Inhalation (rat) gas	ppmV/6h/day	C ≤50.
Inhalation (rat) vapor	mg/liter/6h/day	C ≤0.2.
Inhalation (rat) dust/mist/fume	mg/liter/6h/day	C ≤0.02.

A.9.2.9.7 For Category 2 classification, significant toxic effects observed in a 90-day repeated-dose study conducted in experimental animals and seen to occur within the (suggested) guidance value ranges as indicated in Table A.9.2 would justify classification:

TABLE A.9.2—GUIDANCE VALUES TO ASSIST IN CATEGORY 2 CLASSIFICATION

[Applicable to a 90-day study]

Route of exposure	Units	Guidance values (dose/concentration)
Oral (rat)	mg/kg body weight/day	10 <C ≤100.
Dermal (rat or rabbit)	mg/kg body weight/day	20 <C ≤200.
Inhalation (rat) gas	ppmV/6h/day	50 <C ≤250.
Inhalation (rat) vapor	mg/liter/6h/day	0.2 <C ≤1.0.
Inhalation (rat) dust/mist/fume	mg/liter/6h/day	0.02 <C ≤0.2.

A.9.2.9.8 The guidance values and ranges mentioned in A.2.9.9.6 and A.2.9.9.7 are intended only for guidance purposes, i.e., to be used as part of the weight of evidence approach, and to assist with decisions about

classification. They are not intended as strict demarcation values.

A.9.2.9.9 Thus, it is possible that a specific profile of toxicity occurs in repeat-dose animal studies at a dose/concentration below the guidance value, e.g., <100 mg/kg body weight/day by the oral route, however the nature of the effect, e.g., nephrotoxicity seen only in male rats of a particular strain known to be susceptible to this effect, may result in the decision not to classify. Conversely, a specific profile of toxicity may be seen in animal studies occurring at above a guidance value, e.g., ≥100 mg/kg body weight/day by the oral route, and in addition there is supplementary information from other sources, e.g., other long-term administration studies, or human case experience, which supports a conclusion that, in view of the weight of evidence, classification is prudent.

A.9.2.10 Other Considerations

A.9.2.10.1 When a substance is characterized only by use of animal data the classification process includes reference to dose/concentration guidance values as one of the elements that contribute to the weight of evidence approach.

A.9.2.10.2 When well-substantiated human data are available showing a specific target organ toxic effect that can be reliably attributed to repeated or prolonged exposure to a substance, the substance shall be classified. Positive human data, regardless of probable dose, predominates over animal data. Thus, if a substance is unclassified because no specific target organ toxicity was seen at or below the dose/concentration guidance value for animal testing, if subsequent human incident data become available showing a specific target organ toxic effect, the substance shall be classified.

A.9.2.10.3 A substance that has not been tested for specific target organ toxicity may in certain instances, where appropriate, be classified on the basis of data from a scientifically validated structure activity relationship and expert judgment-based extrapolation from a structural analogue that has previously been classified together with substantial support from consideration of other important factors such as formation of common significant metabolites.

A.9.3 Classification Criteria for Mixtures

A.9.3.1 Mixtures are classified using the same criteria as for substances, or alternatively as described below. As with substances, mixtures may be classified for specific target organ toxicity following single exposure, repeated exposure, or both.

A.9.3.2 Classification of Mixtures When Data Are Available for the Complete Mixture

When reliable and good quality evidence from human experience or appropriate studies in experimental animals, as described in the criteria for substances, is available for the mixture, then the mixture shall be classified by weight of evidence evaluation of these data. Care shall be exercised in evaluating data on mixtures, that the dose, duration, observation or analysis, do not render the results inconclusive.

A.9.3.3 Classification of Mixtures When Data Are Not Available for the Complete Mixture: Bridging Principles

A.9.3.3.1 Where the mixture itself has not been tested to determine its specific target organ toxicity, but there are sufficient data on both the individual ingredients and similar tested mixtures to adequately characterize the hazards of the mixture, these data shall be used in accordance with the following bridging principles as found in paragraph A.0.5 of this Appendix: Dilution; Batching; Concentration of mixtures; Interpolation within one toxicity category; Substantially similar mixtures; and Aerosols.

A.9.3.4 Classification of Mixtures When Data Are Available for All Ingredients or Only for Some Ingredients of the Mixture

A.9.3.4.1 Where there is no reliable evidence or test data for the specific mixture itself, and the bridging principles cannot be used to enable classification, then classification of the mixture is based on the classification of the ingredient substances. In this case, the mixture shall be classified as a specific target organ toxicant (specific organ specified), following single exposure, repeated exposure, or both when at least one ingredient has been classified as a Category 1 or Category 2 specific target organ toxicant and is present at or above the appropriate cut-off value/concentration limit specified in Table A.9.3 for Category 1 and 2 respectively.

TABLE A.9.3—CUT-OFF VALUE/CONCENTRATION LIMITS OF INGREDIENTS OF A MIXTURE CLASSIFIED AS A SPECIFIC TARGET ORGAN TOXICANT THAT WOULD TRIGGER CLASSIFICATION OF THE MIXTURE AS CATEGORY 1 OR 2

Ingredient classified as:	Cut-off values/concentration limits triggering classification of a mixture as:	
	Category 1	Category 2
Category 1 Target organ toxicant	≥1.0%	.....
Category 2 Target organ toxicant	.....	≥1.0%

A.9.3.4.2 These cut-off values and consequent classifications shall be applied equally and appropriately to both single- and repeated-dose target organ toxicants.

A.9.3.4.3 Mixtures shall be classified for either or both single- and repeated-dose toxicity independently.

A.9.3.4.4 Care shall be exercised when toxicants affecting more than one organ system are combined that the potentiation or synergistic interactions are considered, because certain substances can cause specific target organ toxicity at <1% concentration when other ingredients in the mixture are known to potentiate its toxic effect.

A.10 ASPIRATION HAZARD

A.10.1 Definitions and General and Specific Considerations

A.10.1.1 *Aspiration* means the entry of a liquid or solid chemical directly through the oral or nasal cavity, or indirectly from vomiting, into the trachea and lower respiratory system.

A.10.1.2 Aspiration toxicity includes severe acute effects such as chemical pneumonia, varying degrees of pulmonary injury or death following aspiration.

A.10.1.3 Aspiration is initiated at the moment of inspiration, in the time required to take one breath, as the causative material lodges at the crossroad of the upper respiratory and digestive tracts in the laryngopharyngeal region.

A.10.1.4 Aspiration of a substance or mixture can occur as it is vomited following ingestion. This may have consequences for labeling, particularly where, due to acute toxicity, a recommendation may be considered to induce vomiting after ingestion. However, if the substance/mixture also presents an aspiration toxicity hazard, the recommendation to induce vomiting may need to be modified.

A.10.1.5 Specific Considerations

A.10.1.5.1 The classification criteria refer to kinematic viscosity. The following provides the conversion between dynamic and kinematic viscosity:

$$\frac{\text{Dynamic viscosity (mPa·s)}}{\text{Density (g/cm}^3\text{)}} = \text{Kinematic viscosity (mm}^2\text{/s)}$$

A.10.1.5.2 Although the definition of aspiration in A.10.1.1 includes the entry of solids into the respiratory system, classification according to (b) in table A.10.1 for Category 1 is intended to apply to liquid substances and mixtures only.

A.10.1.5.3 Classification of aerosol/mist products.

Aerosol and mist products are usually dispensed in containers such as self-pressurized containers, trigger and pump sprayers. Classification for these products shall be considered if their use may form a pool of product in the mouth, which then may be aspirated. If the mist or aerosol from a pressurized container is fine, a pool may not be formed. On the other hand, if a pressurized container dispenses product in a stream, a pool may be formed that may then be aspirated. Usually, the mist produced by trigger and pump sprayers is coarse and therefore, a pool may be formed that then may be aspirated. When the pump mechanism may be removed and contents are available to be swallowed then the classification of the products should be considered.

A.10.2 Classification Criteria for Substances

TABLE A.10.1—CRITERIA FOR ASPIRATION TOXICITY

Category	Criteria
Category 1: Chemicals known to cause human aspiration toxicity hazards or to be regarded as if they cause human aspiration toxicity hazard.	A substance shall be classified in Category 1: (a) If reliable and good quality human evidence indicates that it causes aspiration toxicity (See note); or (b) If it is a hydrocarbon and has a kinematic viscosity ≤20.5 mm²/s, measured at 40 °C.

Note: Examples of substances included in Category 1 are certain hydrocarbons, turpentine and pine oil.

A.10.3 Classification Criteria for Mixtures

A.10.3.1 Classification When Data Are Available for the Complete Mixture

A mixture shall be classified in Category 1 based on reliable and good quality human evidence.

A.10.3.2 Classification of Mixtures When Data Are Not Available for the Complete Mixture: Bridging Principles

A.10.3.2.1 Where the mixture itself has not been tested to determine its aspiration toxicity, but there are sufficient data on both the individual ingredients and similar tested mixtures to adequately characterize the hazard of the mixture, these data shall be used in accordance with the following bridging principles as found in paragraph A.0.5 of this Appendix: Dilution; Batching; Concentration of mixtures; Interpolation within one toxicity category; and Substantially similar mixtures. For application of the dilution bridging principle, the concentration of aspiration toxicants shall not be less than 10%.

A.10.3.3 Classification of Mixtures When Data Are Available for All Ingredients or Only for Some Ingredients of the Mixture

A.10.3.3.1 A mixture which contains ≥10% of an ingredient or ingredients classified in Category 1, and has a kinematic viscosity ≤20.5 mm²/s, measured at 40 °C, shall be classified in Category 1.

A.10.3.3.2 In the case of a mixture which separates into two or more distinct layers, one of which contains ≥10% of an ingredient or ingredients classified in Category 1 and has a kinematic viscosity ≤20.5 mm²/s, measured at 40 °C, then the entire mixture shall be classified in Category 1.

APPENDIX B TO § 1910.1200—PHYSICAL CRITERIA (MANDATORY)

B.1 EXPLOSIVES

B.1.1 Definitions and General Considerations

B.1.1.1 An *explosive chemical* is a solid or liquid chemical which is in itself capable by chemical reaction of producing gas at such a temperature and pressure and at such a speed as to cause damage to the surroundings. Pyrotechnic chemicals are included even when they do not evolve gases.

A *pyrotechnic chemical* is a chemical designed to produce an effect by heat, light, sound, gas or smoke or a combination of these as the result of non-detonative self-sustaining exothermic chemical reactions.

An *explosive item* is an item containing one or more explosive chemicals.

A *pyrotechnic item* is an item containing one or more pyrotechnic chemicals.

An *unstable explosive* is an explosive which is thermally unstable and/or too sensitive for normal handling, transport, or use.

An *intentional explosive* is a chemical or item which is manufactured with a view to produce a practical explosive or pyrotechnic effect.

B.1.1.2 The class of explosives comprises:

(a) Explosive chemicals;

(b) Explosive items, except devices containing explosive chemicals in such quantity or of such a character that their inadvertent or accidental ignition or initiation shall not cause any effect external to the device either by projection, fire, smoke, heat or loud noise; and

(c) Chemicals and items not included under (a) and (b) above which are manufactured with the view to producing a practical explosive or pyrotechnic effect.

B.1.2 Classification Criteria

Chemicals and items of this class shall be classified as unstable explosives or shall be assigned to one of the following six divisions depending on the type of hazard they present:

(a) Division 1.1—Chemicals and items which have a mass explosion hazard (a mass explosion is one which affects almost the entire quantity present virtually instantaneously);

(b) Division 1.2—Chemicals and items which have a projection hazard but not a mass explosion hazard;

(c) Division 1.3—Chemicals and items which have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but not a mass explosion hazard:

(i) Combustion of which gives rise to considerable radiant heat; or

(ii) Which burn one after another, producing minor blast or projection effects or both;

(d) Division 1.4—Chemicals and items which present no significant hazard: chemicals and items which present only a small hazard in the event of ignition or initiation. The effects are largely confined to the package and no projection of fragments of appreciable size or range is to be expected. An external fire shall not cause virtually instantaneous explosion of almost the entire contents of the package;

(e) Division 1.5—Very insensitive chemicals which have a mass explosion hazard: chemicals which have a mass explosion hazard but are so insensitive that there is very little probability of initiation or of transition from burning to detonation under normal conditions;

(f) Division 1.6—Extremely insensitive items which do not have a mass explosion hazard: items which contain only extremely insensitive detonating chemicals and which demonstrate a negligible probability of accidental initiation or propagation.

B.1.3 Additional Classification Considerations

B.1.3.1 Explosives shall be classified as unstable explosives or shall be assigned to one of the six divisions identified in B.1.2 in accordance with the three step procedure in Part I of the UN ST/SG/AC.10 (incorporated by reference; See § 1910.6). The first step is to ascertain whether the substance or mixture has explosive effects (Test Series 1). The second step is the acceptance procedure (Test Series 2 to 4) and the third step is the assignment to a hazard division (Test Series 5 to 7). The assessment whether a candidate for ''ammonium nitrate emulsion or suspension or gel, intermediate for blasting explosives (ANE)'' is insensitive enough for inclusion as an oxidizing liquid (See B.13) or an oxidizing solid (See B.14) is determined by Test Series 8 tests.

Note: Classification of solid chemicals shall be based on tests performed on the chemical as presented. If, for example, for the purposes of supply or transport, the same

chemical is to be presented in a physical form different from that which was tested and which is considered likely to materially alter its performance in a classification test, classification must be based on testing of the chemical in the new form.

B.1.3.2 Explosive properties are associated with the presence of certain chemical groups in a molecule which can react to produce very rapid increases in temperature or pressure. The screening procedure in B.1.3.1 is aimed at identifying the presence of such reactive groups and the potential for rapid energy release. If the screening procedure identifies the chemical as a potential explosive, the acceptance procedure (See section 10.3 of the UN ST/SG/AC.10 (incorporated by reference; See § 1910.6)) is necessary for classification.

Note: Neither a Series 1 type (a) propagation of detonation test nor a Series 2 type (a) test of sensitivity to detonative shock is necessary if the exothermic decomposition energy of organic materials is less than 800 J/g.

B.1.3.3 If a mixture contains any known explosives, the acceptance procedure is necessary for classification.

B.1.3.4 A chemical is not classified as explosive if:

(a) There are no chemical groups associated with explosive properties present in the molecule. Examples of groups which may indicate explosive properties are given in Table A6.1 in Appendix 6 of the UN ST/SG/AC.10 (incorporated by reference; See § 1910.6); or

(b) The substance contains chemical groups associated with explosive properties which include oxygen and the calculated oxygen balance is less than −200.

The oxygen balance is calculated for the chemical reaction:

$C_xH_yO_z + [x + (y/4) - (z/2)]\ O_2 \rightarrow x.\ CO_2 + (y/2)\ H_2O$

using the formula:

oxygen balance = $-1600\ [2x + (y/2) - z]$/molecular weight;

or

(c) The organic substance or a homogenous mixture of organic substances contains chemical groups associated with explosive properties but the exothermic decomposition energy is less than 500 J/g and the onset of exothermic decomposition is below 500 °C (932 °F). The exothermic decomposition energy may be determined using a suitable calorimetric technique; or

(d) For mixtures of inorganic oxidizing substances with organic material(s), the concentration of the inorganic oxidizing substance is:

(i) Less than 15%, by mass, if the oxidizing substance is assigned to Category 1 or 2;

(ii) Less than 30%, by mass, if the oxidizing substance is assigned to Category 3.

B.2 FLAMMABLE GASES

B.2.1 Definition

Flammable gas means a gas having a flammable range with air at 20 °C (68 °F) and a standard pressure of 101.3 kPa (14.7 psi).

B.2.2 Classification Criteria

A flammable gas shall be classified in one of the two categories for this class in accordance with Table B.2.1:

TABLE B.2.1—CRITERIA FOR FLAMMABLE GASES

Category	Criteria
1	Gases, which at 20 °C (68 °F) and a standard pressure of 101.3 kPa (14.7 psi): (a) are ignitable when in a mixture of 13% or less by volume in air; or (b) have a flammable range with air of at least 12 percentage points regardless of the lower flammable limit.
2	Gases, other than those of Category 1, which, at 20 °C (68 °F) and a standard pressure of 101.3 kPa (14.7 psi), have a flammable range while mixed in air.

Note: Aerosols should not be classified as flammable gases. See B.3.

B.2.3 Additional Classification Considerations

Flammability shall be determined by tests or by calculation in accordance with ISO 10156 (incorporated by reference; See § 1910.6). Where insufficient data are available to use this method, equivalent validated methods may be used.

B.3 FLAMMABLE AEROSOLS

B.3.1 Definition

Aerosol means any non-refillable receptacle containing a gas compressed, liquefied or dissolved under pressure, and fitted with a release device allowing the contents to be ejected as particles in suspension in a gas, or as a foam, paste, powder, liquid or gas.

B.3.2 Classification Criteria

B.3.2.1 Aerosols shall be considered for classification as flammable if they contain any component which is classified as flammable in accordance with this Appendix, i.e.:

Flammable liquids (See B.6);
Flammable gases (See B.2);
Flammable solids (See B.7).

Note 1: Flammable components do not include pyrophoric, self-heating or water-reactive chemicals.

Note 2: Flammable aerosols do not fall additionally within the scope of flammable gases, flammable liquids, or flammable solids.

B.3.2.2 A flammable aerosol shall be classified in one of the two categories for this class in accordance with Table B.3.1.

TABLE B.3.1—CRITERIA FOR FLAMMABLE AEROSOLS

Category	Criteria
1	Contains ≥85% flammable components and the chemical heat of combustion is ≥30 kJ/g; or (a) For spray aerosols, in the ignition distance test, ignition occurs at a distance ≥75 cm (29.5 in), or (b) For foam aerosols, in the aerosol foam flammability test. (i) The flame height is ≥20 cm (7.87 in) and the flame duration ≥2 s; or (ii) The flame height is ≥4 cm (1.57 in) and the flame duration ≥7 s.
2	Contains >1% flammable components, or the heat of combustion is ≥20 kJ/g; and (a) for spray aerosols, in the ignition distance test, ignition occurs at a distance ≥15 cm (5.9 in), or in the enclosed space ignition test, the (i) Time equivalent is ≤300 s/m^3; or (ii) Deflagration density is ≤300 g/m^3. (b) For foam aerosols, in the aerosol foam flammability test, the flame height is ≥4 cm and the flame duration is ≥2 s and it does not meet the criteria for Category 1.

Note: Aerosols not submitted to the flammability classification procedures in this Appendix shall be classified as extremely flammable (Category 1).

B.3.3 Additional Classification Considerations

B.3.3.1 To classify a flammable aerosol, data on its flammable components, on its chemical heat of combustion and, if applicable, the results of the aerosol foam flammability test (for foam aerosols) and of the ignition distance test and enclosed space test (for spray aerosols) are necessary.

B.3.3.2 The chemical heat of combustion (ΔHc), in kilojoules per gram (kJ/g), is the product of the theoretical heat of combustion (ΔHcomb), and a combustion efficiency, usually less than 1.0 (a typical combustion efficiency is 0.95 or 95%).

For a composite aerosol formulation, the chemical heat of combustion is the summation of the weighted heats of combustion for the individual components, as follows:

$$\Delta Hc\ (product) = \sum_{i}^{n} [\ wi\% \times \Delta Hc(i)]$$

Where:

ΔHc = chemical heat of combustion (kJ/g);
wi% = mass fraction of component i in the product;
ΔHc(i) = specific heat of combustion (kJ/g) of component i in the product;

The chemical heats of combustion shall be found in literature, calculated or determined by tests (See ASTM D240–02, ISO 13943, Sections 86.1 to 86.3, and NFPA 30B (incorporated by reference; See § 1910.6)).

B.3.3.3 The Ignition Distance Test, Enclosed Space Ignition Test and Aerosol Foam Flammability Test shall be performed in accordance with sub-sections 31.4, 31.5 and 31.6 of the of the UN ST/SG/AC.10 (incorporated by reference; See § 1910.6).

B.4 OXIDIZING GASES

B.4.1 Definition

Oxidizing gas means any gas which may, generally by providing oxygen, cause or contribute to the combustion of other material more than air does.

Note: ''Gases which cause or contribute to the combustion of other material more than air does'' means pure gases or gas mixtures with an oxidizing power greater than 23.5% (as determined by a method specified in ISO 10156 or 10156–2 (incorporated by reference, See § 1910.6) or an equivalent testing method.)

B.4.2 Classification Criteria

An oxidizing gas shall be classified in a single category for this class in accordance with Table B.4.1:

TABLE B.4.1—CRITERIA FOR OXIDIZING GASES

Category	Criteria
1	Any gas which may, generally by providing oxygen, cause or contribute to the combustion of other material more than air does.

B.4.3 Additional Classification Considerations

Classification shall be in accordance with tests or calculation methods as described in ISO 10156 (incorporated by reference; See § 1910.6) and ISO 10156–2 (incorporated by reference; See § 1910.6).

B.5 GASES UNDER PRESSURE

B.5.1 Definition

Gases under pressure are gases which are contained in a receptacle at a pressure of 200 kPa (29 psi) (gauge) or more, or which are liquefied or liquefied and refrigerated. They comprise compressed gases, liquefied gases, dissolved gases and refrigerated liquefied gases.

B.5.2 Classification Criteria

Gases under pressure shall be classified in one of four groups in accordance with Table B.5.1:

TABLE B.5.1—CRITERIA FOR GASES UNDER PRESSURE

Group	Criteria
Compressed gas	A gas which when under pressure is entirely gaseous at −50 °C (−8 °F), including all gases with a critical temperature[1] ≤ −50 °C (−58 °F).
Liquefied gas	A gas which when under pressure is partially liquid at temperatures above −50 °C (−58 °F). A distinction is made between: (a) High pressure liquefied gas: A gas with a critical temperature[1] between −50 °C (−58 °F) and +65 °C (149 °F); and (b) Low pressure liquefied gas: A gas with a critical temperature[1] above +65 °C (149 °F).
Refrigerated liquefied gas	A gas which is made partially liquid because of its low temperature.
Dissolved gas	A gas which when under pressure is dissolved in a liquid phase solvent.

[1] *The critical temperature is the temperature above which a pure gas cannot be liquefied, regardless of the degree of compression.*

B.6 FLAMMABLE LIQUIDS

B.6.1 Definition

Flammable liquid means a liquid having a flash point of not more than 93 °C (199.4 °F).

Flash point means the minimum temperature at which a liquid gives off vapor in sufficient concentration to form an ignitable mixture with air near the surface of the liquid, as determined by a method identified in Section B.6.3.

B.6.2 Classification Criteria

A flammable liquid shall be classified in one of four categories in accordance with Table B.6.1:

TABLE B.6.1—CRITERIA FOR FLAMMABLE LIQUIDS

Category	Criteria
1	Flash point <23 °C (73.4 °F) and initial boiling point ≤35 °C (95 °F).

TABLE B.6.1—CRITERIA FOR FLAMMABLE LIQUIDS—Continued

Category	Criteria
2	Flash point <23 °C (73.4 °F) and initial boiling point >35 °C (95 °F).
3	Flash point ≥23 °C (73.4 °F) and ≤60 °C (140 °F).
4	Flash point >60 °C (140 °F) and ≤93 °C (199.4 °F).

B.6.3 Additional Classification Considerations

The flash point shall be determined in accordance with ASTM D56–05, ASTM D3278, ASTM D3828, ASTM D93–08 (incorporated by reference; See § 1910.6), or any other method specified in GHS Revision 3, Chapter 2.6.

The initial boiling point shall be determined in accordance with ASTM D86–07a or ASTM D1078 (incorporated by reference; See § 1910.6).

B.7 FLAMMABLE SOLIDS

B.7.1 Definitions

Flammable solid means a solid which is a readily combustible solid, or which may cause or contribute to fire through friction.

Readily combustible solids are powdered, granular, or pasty chemicals which are dangerous if they can be easily ignited by brief contact with an ignition source, such as a burning match, and if the flame spreads rapidly.

B.7.2 Classification Criteria

B.7.2.1 Powdered, granular or pasty chemicals shall be classified as flammable solids when the time of burning of one or more of the test runs, performed in accordance with the test method described in the UN ST/SG/AC.10 (incorporated by reference; See § 1910.6), Part III, sub-section 33.2.1, is less than 45 s or the rate of burning is more than 2.2 mm/s (0.0866 in/s).

B.7.2.2 Powders of metals or metal alloys shall be classified as flammable solids when they can be ignited and the reaction spreads over the whole length of the sample in 10 min or less.

B.7.2.3 Solids which may cause fire through friction shall be classified in this class by analogy with existing entries (e.g., matches) until definitive criteria are established.

B.7.2.4 A flammable solid shall be classified in one of the two categories for this class using Method N.1 as described in Part III, sub-section 33.2.1 of the UN ST/SG/AC.10 (incorporated by reference; See § 1910.6), in accordance with Table B.7.1:

TABLE B.7.1—CRITERIA FOR FLAMMABLE SOLIDS

Category	Criteria
1	Burning rate test: Chemicals other than metal powders: (a) Wetted zone does not stop fire; and (b) Burning time <45 s or burning rate >2.2 mm/s. Metal powders: Burning time ≤5 min.
2	Burning rate test: Chemicals other than metal powders: (a) Wetted zone stops the fire for at least 4 min; and (b) Burning time <45 s or burning rate >2.2 mm/s. Metal powders: Burning time >5 min and ≤10 min.

Note: Classification of solid chemicals shall be based on tests performed on the chemical as presented. If, for example, for the purposes of supply or transport, the same chemical is to be presented in a physical form different from that which was tested and which is considered likely to materially alter its performance in a classification test, classification must be based on testing of the chemical in the new form.

B.8 SELF-REACTIVE CHEMICALS

B.8.1 Definitions

Self-reactive chemicals are thermally unstable liquid or solid chemicals liable to undergo a strongly exothermic decomposition even without participation of oxygen (air). This definition excludes chemicals classified under this section as explosives, organic peroxides, oxidizing liquids or oxidizing solids.

A self-reactive chemical is regarded as possessing explosive properties when in laboratory testing the formulation is liable to detonate, to deflagrate rapidly or to show a violent effect when heated under confinement.

B.8.2 Classification Criteria

B.8.2.1 A self-reactive chemical shall be considered for classification in this class unless:

(a) It is classified as an explosive according to B.1 of this appendix;

(b) It is classified as an oxidizing liquid or an oxidizing solid according to B.13 or B.14 of this appendix, except that a mixture of oxidizing substances which contains 5% or more of combustible organic substances shall be classified as a self-reactive chemical according to the procedure defined in B.8.2.2;

(c) It is classified as an organic peroxide according to B.15 of this appendix;

(d) Its heat of decomposition is less than 300 J/g; or

(e) Its self-accelerating decomposition temperature (SADT) is greater than 75 °C (167 °F) for a 50 kg (110 lb) package.

B.8.2.2 Mixtures of oxidizing substances, meeting the criteria for classification as oxidizing liquids or oxidizing solids, which contain 5% or more of combustible organic substances and which do not meet the criteria mentioned in B.8.2.1 (a), (c), (d) or (e), shall be subjected to the self-reactive chemicals classification procedure in B.8.2.3. Such a mixture showing the properties of a self-reactive chemical type B to F shall be classified as a self-reactive chemical.

B.8.2.3 Self-reactive chemicals shall be classified in one of the seven categories of ''types A to G'' for this class, according to the following principles:

(a) Any self-reactive chemical which can detonate or deflagrate rapidly, as packaged, will be defined as self-reactive chemical TYPE A;

(b) Any self-reactive chemical possessing explosive properties and which, as packaged, neither detonates nor deflagrates rapidly, but is liable to undergo a thermal explosion in that package will be defined as self-reactive chemical TYPE B;

(c) Any self-reactive chemical possessing explosive properties when the chemical as packaged cannot detonate or deflagrate rapidly or undergo a thermal explosion will be defined as self-reactive chemical TYPE C;

(d) Any self-reactive chemical which in laboratory testing meets the criteria in (d)(i), (ii), or (iii) will be defined as self-reactive chemical TYPE D:

(i) Detonates partially, does not deflagrate rapidly and shows no violent effect when heated under confinement; or

(ii) Does not detonate at all, deflagrates slowly and shows no violent effect when heated under confinement; or

(iii) Does not detonate or deflagrate at all and shows a medium effect when heated under confinement;

(e) Any self-reactive chemical which, in laboratory testing, neither detonates nor deflagrates at all and shows low or no effect when heated under confinement will be defined as self-reactive chemical TYPE E;

(f) Any self-reactive chemical which, in laboratory testing, neither detonates in the cavitated state nor deflagrates at all and shows only a low or no effect when heated under confinement as well as low or no explosive power will be defined as self-reactive chemical TYPE F;

(g) Any self-reactive chemical which, in laboratory testing, neither detonates in the cavitated state nor deflagrates at all and shows no effect when heated under confinement nor any explosive power, provided that it is thermally stable (self-accelerating decomposition temperature is 60 °C (140 °F) to 75 °C (167 °F) for a 50 kg (110 lb) package), and, for liquid mixtures, a diluent having a boiling point greater than or equal to 150 °C (302 °F) is used for desensitization will be defined as self-reactive chemical TYPE G. If the mixture is not thermally stable or a diluent having a boiling point less than 150 °C (302 °F) is used for desensitization, the mixture shall be defined as self-reactive chemical TYPE F.

B.8.3 Additional Classification Considerations

B.8.3.1 For purposes of classification, the properties of self-reactive chemicals shall be determined in accordance with test series A to H as described in Part II of the UN ST/SG/AC.10 (incorporated by reference; See § 1910.6).

B.8.3.2 Self-accelerating decomposition temperature (SADT) shall be determined in accordance with the UN ST/SG/AC.10, Part II, section 28 (incorporated by reference; See § 1910.6).

B.8.3.3 The classification procedures for self-reactive substances and mixtures need not be applied if:

(a) There are no chemical groups present in the molecule associated with explosive or self-reactive properties; examples of such groups are given in Tables A6.1 and A6.2 in the Appendix 6 of the UN ST/SG/AC.10 (incorporated by reference; See § 1910.6); or

(b) For a single organic substance or a homogeneous mixture of organic substances, the estimated SADT is greater than 75 °C (167 °F) or the exothermic decomposition energy is less than 300 J/g. The onset temperature and decomposition energy may be estimated using a suitable calorimetric technique (See 20.3.3.3 in Part II of the UN ST/SG/AC.10 (incorporated by reference; See § 1910.6)).

B.9 PYROPHORIC LIQUIDS

B.9.1 Definition

Pyrophoric liquid means a liquid which, even in small quantities, is liable to ignite within five minutes after coming into contact with air.

B.9.2 Classification Criteria

A pyrophoric liquid shall be classified in a single category for this class using test N.3 in Part III, sub-section 33.3.1.5 of the UN ST/SG/AC.10 (incorporated by reference; See § 1910.6), in accordance with Table B.9.1:

TABLE B.9.1—CRITERIA FOR PYROPHORIC LIQUIDS

Category	Criteria
1	The liquid ignites within 5 min when added to an inert carrier and exposed to air, or it ignites or chars a filter paper on contact with air within 5 min.

B.9.3 Additional Classification Considerations

The classification procedure for pyrophoric liquids need not be applied when experience in production or handling shows that the chemical does not ignite spontaneously on coming into contact with air at normal temperatures (i.e., the substance is known to be stable at room temperature for prolonged periods of time (days)).

B.10 PYROPHORIC SOLIDS

B.10.1 Definition

Pyrophoric solid means a solid which, even in small quantities, is liable to ignite within five minutes after coming into contact with air.

B.10.2 Classification Criteria

A pyrophoric solid shall be classified in a single category for this class using test N.2 in Part III, sub-section 33.3.1.4 of the UN ST/SG/AC.10 (incorporated by reference; See § 1910.6), in accordance with Table B.10.1:

TABLE B.10.1—CRITERIA FOR PYROPHORIC SOLIDS

Category	Criteria
1	The solid ignites within 5 min of coming into contact with air.

Note: Classification of solid chemicals shall be based on tests performed on the chemical as presented. If, for example, for the purposes of supply or transport, the same chemical is to be presented in a physical form different from that which was tested and which is considered likely to materially alter its performance in a classification test, classification must be based on testing of the chemical in the new form.

B.10.3 Additional Classification Considerations

The classification procedure for pyrophoric solids need not be applied when experience in production or handling shows that the chemical does not ignite spontaneously on coming into contact with air at normal temperatures (i.e., the chemical is known to be stable at room temperature for prolonged periods of time (days)).

B.11 SELF-HEATING CHEMICALS

B.11.1 Definition

A *self-heating chemical* is a solid or liquid chemical, other than a pyrophoric liquid or solid, which, by reaction with air and without energy supply, is liable to self-heat; this chemical differs from a pyrophoric liquid or solid in that it will ignite only when in large amounts (kilograms) and after long periods of time (hours or days).

Note: Self-heating of a substance or mixture is a process where the gradual reaction of that substance or mixture with oxygen (in air) generates heat. If the rate of heat production exceeds the rate of heat loss, then the temperature of the substance or mixture will rise which, after an induction time, may lead to self-ignition and combustion.

B.11.2 Classification Criteria

B.11.2.1 A self-heating chemical shall be classified in one of the two categories for this class if, in tests performed in accordance with test method N.4 in Part III, sub-section 33.3.1.6 of the UN ST/SG/AC.10 (incorporated by reference; See § 1910.6), the result meets the criteria shown in Table B.11.1.

TABLE B.11.1—CRITERIA FOR SELF-HEATING CHEMICALS

Category	Criteria
1	A positive result is obtained in a test using a 25 mm sample cube at 140 °C (284 °F).
2	A negative result is obtained in a test using a 25 mm cube sample at 140 °C (284 °F), a positive result is obtained in a test using a 100 mm sample cube at 140 °C (284 °F), and: (a) The unit volume of the chemical is more than 3 m^3; or (b) A positive result is obtained in a test using a 100 mm cube sample at 120 °C (248 °F) and the unit volume of the chemical is more than 450 liters; or (c) A positive result is obtained in a test using a 100 mm cube sample at 100 °C (212 °F).

B.11.2.2 Chemicals with a temperature of spontaneous combustion higher than 50 °C (122 °F) for a volume of 27 m^3 shall not be classified as self-heating chemicals.

B.11.2.3 Chemicals with a spontaneous ignition temperature higher than 50 °C (122 °F) for a volume of 450 liters shall not be classified in Category 1 of this class.

B.11.3 Additional Classification Considerations

B.11.3.1 The classification procedure for self-heating chemicals need not be applied if the results of a screening test can be adequately correlated with the classification test and an appropriate safety margin is applied.

B.11.3.2 Examples of screening tests are:

(a) The Grewer Oven test (VDI guideline 2263, part 1, 1990, Test methods for the Determination of the Safety Characteristics of Dusts) with an onset temperature 80°K above the reference temperature for a volume of 1 *l;*

(b) The Bulk Powder Screening Test (Gibson, N. Harper, D. J. Rogers, R. Evaluation of the fire and explosion risks in drying powders, Plant Operations Progress, 4 (3), 181–189, 1985) with an onset temperature 60°K above the reference temperature for a volume of 1 *l.*

B.12 CHEMICALS WHICH, IN CONTACT WITH WATER, EMIT FLAMMABLE GASES

B.12.1 Definition

Chemicals which, in contact with water, emit flammable gases are solid or liquid chemicals which, by interaction with water, are liable to become spontaneously flammable or to give off flammable gases in dangerous quantities.

B.12.2 Classification Criteria

B.12.2.1 A chemical which, in contact with water, emits flammable gases shall be classified in one of the three categories for this class, using test N.5 in Part III, sub-section 33.4.1.4 of the UN ST/SG/AC.10 (incorporated by reference; See § 1910.6), in accordance with Table B.12.1:

TABLE B.12.1—CRITERIA FOR CHEMICALS WHICH, IN CONTACT WITH WATER, EMIT FLAMMABLE GASES

Category	Criteria
1	Any chemical which reacts vigorously with water at ambient temperatures and demonstrates generally a tendency for the gas produced to ignite spontaneously, or which reacts readily with water at ambient temperatures such that the rate of evolution of flammable gas is equal to or greater than 10 liters per kilogram of chemical over any one minute.
2	Any chemical which reacts readily with water at ambient temperatures such that the maximum rate of evolution of flammable gas is equal to or greater than 20 liters per kilogram of chemical per hour, and which does not meet the criteria for Category 1.
3	Any chemical which reacts slowly with water at ambient temperatures such that the maximum rate of evolution of flammable gas is equal to or greater than 1 liter per kilogram of chemical per hour, and which does not meet the criteria for Categories 1 and 2.

Note: Classification of solid chemicals shall be based on tests performed on the chemical as presented. If, for example, for the purposes of supply or transport, the same chemical is to be presented in a physical form different from that which was tested and which is considered likely to materially alter its performance in a classification test, classification must be based on testing of the chemical in the new form.

B.12.2.2 A chemical is classified as a chemical which, in contact with water emits flammable gases if spontaneous ignition takes place in any step of the test procedure.

B.12.3 Additional Classification Considerations

The classification procedure for this class need not be applied if:

(a) The chemical structure of the chemical does not contain metals or metalloids;

(b) Experience in production or handling shows that the chemical does not react with water, (e.g., the chemical is manufactured with water or washed with water); or

(c) The chemical is known to be soluble in water to form a stable mixture.

B.13 OXIDIZING LIQUIDS

B.13.1 Definition

Oxidizing liquid means a liquid which, while in itself not necessarily combustible, may, generally by yielding oxygen, cause, or contribute to, the combustion of other material.

B.13.2 Classification Criteria

An oxidizing liquid shall be classified in one of the three categories for this class using test O.2 in Part III, sub-section 34.4.2 of the UN ST/SG/AC.10 (incorporated by reference; See § 1910.6), in accordance with Table B.13.1:

TABLE B.13.1—CRITERIA FOR OXIDIZING LIQUIDS

Category	Criteria
1	Any chemical which, in the 1:1 mixture, by mass, of chemical and cellulose tested, spontaneously ignites; or the mean pressure rise time of a 1:1 mixture, by mass, of chemical and cellulose is less than that of a 1:1 mixture, by mass, of 50% perchloric acid and cellulose;

TABLE B.13.1—CRITERIA FOR OXIDIZING LIQUIDS—Continued

Category	Criteria
2	Any chemical which, in the 1:1 mixture, by mass, of chemical and cellulose tested, exhibits a mean pressure rise time less than or equal to the mean pressure rise time of a 1:1 mixture, by mass, of 40% aqueous sodium chlorate solution and cellulose; and the criteria for Category 1 are not met;
3	Any chemical which, in the 1:1 mixture, by mass, of chemical and cellulose tested, exhibits a mean pressure rise time less than or equal to the mean pressure rise time of a 1:1 mixture, by mass, of 65% aqueous nitric acid and cellulose; and the criteria for Categories 1 and 2 are not met.

B.13.3 Additional Classification Considerations

B.13.3.1 For organic chemicals, the classification procedure for this class shall not be applied if:

(a) The chemical does not contain oxygen, fluorine or chlorine; or

(b) The chemical contains oxygen, fluorine or chlorine and these elements are chemically bonded only to carbon or hydrogen.

B.13.3.2 For inorganic chemicals, the classification procedure for this class shall not be applied if the chemical does not contain oxygen or halogen atoms.

B.13.3.3 In the event of divergence between test results and known experience in the handling and use of chemicals which shows them to be oxidizing, judgments based on known experience shall take precedence over test results.

B.13.3.4 In cases where chemicals generate a pressure rise (too high or too low), caused by chemical reactions not characterizing the oxidizing properties of the chemical, the test described in Part III, sub-section 34.4.2 of the UN ST/SG/AC.10 (incorporated by reference; See § 1910.6) shall be repeated with an inert substance (e.g., diatomite (kieselguhr)) in place of the cellulose in order to clarify the nature of the reaction.

B.14 OXIDIZING SOLIDS

B.14.1 Definition

Oxidizing solid means a solid which, while in itself is not necessarily combustible, may, generally by yielding oxygen, cause, or contribute to, the combustion of other material.

B.14.2 Classification Criteria

An oxidizing solid shall be classified in one of the three categories for this class using test O.1 in Part III, sub-section 34.4.1 of the UN ST/SG/AC.10 (incorporated by reference; See § 1910.6), in accordance with Table B.14.1:

TABLE B.14.1—CRITERIA FOR OXIDIZING SOLIDS

Category	Criteria
1	Any chemical which, in the 4:1 or 1:1 sample-to-cellulose ratio (by mass) tested, exhibits a mean burning time less than the mean burning time of a 3:2 mixture, by mass, of potassium bromate and cellulose.
2	Any chemical which, in the 4:1 or 1:1 sample-to-cellulose ratio (by mass) tested, exhibits a mean burning time equal to or less than the mean burning time of a 2:3 mixture (by mass) of potassium bromate and cellulose and the criteria for Category 1 are not met.
3	Any chemical which, in the 4:1 or 1:1 sample-to-cellulose ratio (by mass) tested, exhibits a mean burning time equal to or less than the mean burning time of a 3:7 mixture (by mass) of potassium bromate and cellulose and the criteria for Categories 1 and 2 are not met.

Note 1: Some oxidizing solids may present explosion hazards under certain conditions (e.g., when stored in large quantities). For example, some types of ammonium nitrate may give rise to an explosion hazard under extreme conditions and the ''Resistance to detonation test'' (IMO: Code of Safe Practice for Solid Bulk Cargoes, 2005, Annex 3, Test 5) may be used to assess this hazard. When information indicates that an oxidizing solid may present an explosion hazard, it shall be indicated on the Safety Data Sheet.

Note 2: Classification of solid chemicals shall be based on tests performed on the chemical as presented. If, for example, for the purposes of supply or transport, the same chemical is to be presented in a physical form different from that which was tested and which is considered likely to materially alter its performance in a classification test, classification must be based on testing of the chemical in the new form.

B.14.3 Additional Classification Considerations

B.14.3.1 For organic chemicals, the classification procedure for this class shall not be applied if:

(a) The chemical does not contain oxygen, fluorine or chlorine; or

(b) The chemical contains oxygen, fluorine or chlorine and these elements are chemically bonded only to carbon or hydrogen.

B.14.3.2 For inorganic chemicals, the classification procedure for this class shall not be applied if the chemical does not contain oxygen or halogen atoms.

B.14.3.3 In the event of divergence between test results and known experience in the handling and use of chemicals which shows them to be oxidizing, judgements based on known experience shall take precedence over test results.

B.15 ORGANIC PEROXIDES

B.15.1 Definition

B.15.1.1 *Organic peroxide* means a liquid or solid organic chemical which contains the bivalent –0–0– structure and as such is considered a derivative of hydrogen peroxide, where one or both of the hydrogen atoms have been replaced by organic radicals. The term organic peroxide includes organic peroxide mixtures containing at least one organic peroxide. Organic peroxides are thermally unstable chemicals, which may undergo exothermic self-accelerating decomposition. In addition, they may have one or more of the following properties:

(a) Be liable to explosive decomposition;

(b) Burn rapidly;

(c) Be sensitive to impact or friction;

(d) React dangerously with other substances.

B.15.1.2 An organic peroxide is regarded as possessing explosive properties when in laboratory testing the formulation is liable to detonate, to deflagrate rapidly or to show a violent effect when heated under confinement.

B.15.2 Classification Criteria

B.15.2.1 Any organic peroxide shall be considered for classification in this class, unless it contains:

(a) Not more than 1.0% available oxygen from the organic peroxides when containing not more than 1.0% hydrogen peroxide; or

(b) Not more than 0.5% available oxygen from the organic peroxides when containing more than 1.0% but not more than 7.0% hydrogen peroxide.

Note: The available oxygen content (%) of an organic peroxide mixture is given by the formula:

$$16 \times \sum_{i}^{n} \left(\frac{n_i \times c_i}{m_i} \right)$$

Where:

n_i = number of peroxygen groups per molecule of organic peroxide *i*;

c_i = concentration (mass %) of organic peroxide *i*;

m_i = molecular mass of organic peroxide *i*.

B.15.2.2 Organic peroxides shall be classified in one of the seven categories of ''Types A to G'' for this class, according to the following principles:

(a) Any organic peroxide which, as packaged, can detonate or deflagrate rapidly shall be defined as organic peroxide TYPE A;

(b) Any organic peroxide possessing explosive properties and which, as packaged, neither detonates nor deflagrates rapidly, but is liable to undergo a thermal explosion in that package shall be defined as organic peroxide TYPE B;

(c) Any organic peroxide possessing explosive properties when the chemical as packaged cannot detonate or deflagrate rapidly or undergo a thermal explosion shall be defined as organic peroxide TYPE C;

(d) Any organic peroxide which in laboratory testing meets the criteria in (d)(i), (ii), or (iii) shall be defined as organic peroxide TYPE D:

(i) Detonates partially, does not deflagrate rapidly and shows no violent effect when heated under confinement; or

(ii) Does not detonate at all, deflagrates slowly and shows no violent effect when heated under confinement; or

(iii) Does not detonate or deflagrate at all and shows a medium effect when heated under confinement;

(e) Any organic peroxide which, in laboratory testing, neither detonates nor deflagrates at all and shows low or no effect when heated under confinement shall be defined as organic peroxide TYPE E;

(f) Any organic peroxide which, in laboratory testing, neither detonates in the cavitated state nor deflagrates at all and shows only a low or no effect when heated under confinement as well as low or no explosive power shall be defined as organic peroxide TYPE F;

(g) Any organic peroxide which, in laboratory testing, neither detonates in the cavitated state nor deflagrates at all and shows no effect when heated under confinement nor any explosive power, provided that it is thermally stable (self-accelerating decomposition temperature is 60 °C (140 °F) or higher for a 50 kg (110 lb) package), and, for liquid mixtures, a diluent having a boiling point of not less than 150 °C (302 °F) is used for desensitization, shall be defined as organic peroxide TYPE G. If the organic peroxide is not thermally stable or a diluent having a boiling point less than 150 °C (302 °F) is used for desensitization, it shall be defined as organic peroxide TYPE F.

B.15.3 Additional Classification Considerations

B.15.3.1 For purposes of classification, the properties of organic peroxides shall be determined in accordance with test series A to H as described in Part II of the UN ST/SG/AC.10 (incorporated by reference; See § 1910.6).

B.15.3.2 Self-accelerating decomposition temperature (SADT) shall be determined in accordance with the UN ST/SG/AC.10 (incorporated by reference; See § 1910.6), Part II, section 28.

B.15.3.3 Mixtures of organic peroxides may be classified as the same type of organic peroxide as that of the most dangerous ingredient. However, as two stable ingredients can form a thermally less stable mixture, the SADT of the mixture shall be determined.

B.16 CORROSIVE TO METALS

B.16.1 Definition

A *chemical which is corrosive to metals* means a chemical which by chemical action will materially damage, or even destroy, metals.

B.16.2 Classification Criteria

A chemical which is corrosive to metals shall be classified in a single category for this class, using the test in Part III, sub-section 37.4 of the UN ST/SG/AC.10 (incorporated by reference; See § 1910.6), in accordance with Table B.16.1:

TABLE B.16.1—CRITERIA FOR CHEMICALS CORROSIVE TO METAL

Category	Criteria
1	Corrosion rate on either steel or aluminium surfaces exceeding 6.25 mm per year at a test temperature of 55 °C (131 °F) when tested on both materials.

Note: Where an initial test on either steel or aluminium indicates the chemical being tested is corrosive, the follow-up test on the other metal is not necessary.

B.16.3 Additional Classification Considerations

The specimen to be used for the test shall be made of the following materials:

(a) For the purposes of testing steel, steel types S235JR+CR (1.0037 resp.St 37–2), S275J2G3+CR (1.0144 resp.St 44–3), ISO 3574, Unified Numbering System (UNS) G 10200, or SAE 1020;

(b) For the purposes of testing aluminium: Non-clad types 7075–T6 or AZ5GU–T6.

APPENDIX C TO § 1910.1200—ALLOCATION OF LABEL ELEMENTS (MANDATORY)

C.1 The label for each hazardous chemical shall include the product identifier used on the safety data sheet.

C.1.1 The labels on shipped containers shall also include the name, address, and telephone number of the chemical manufacturer, importer, or responsible party.

C.2 The label for each hazardous chemical that is classified shall include the signal word, hazard statement(s), pictogram(s), and precautionary statement(s) specified in C.4 for each hazard class and associated hazard category, except as provided for in C.2.1 through C.2.4.

C.2.1 Precedence of Hazard Information

C.2.1.1 If the signal word ''Danger'' is included, the signal word ''Warning'' shall not appear;

C.2.1.2 If the skull and crossbones pictogram is included, the exclamation mark pictogram shall not appear where it is used for acute toxicity;

C.2.1.3 If the corrosive pictogram is included, the exclamation mark pictogram shall not appear where it is used for skin or eye irritation;

C.2.1.4 If the health hazard pictogram is included for respiratory sensitization, the exclamation mark pictogram shall not appear where it is used for skin sensitization or for skin or eye irritation.

C.2.2 Hazard Statement Text

C.2.2.1 The text of all applicable hazard statements shall appear on the label, except as otherwise specified. The information in italics shall be included as part of the hazard statement as provided. For example: ''causes damage to organs *(state all organs affected)* through prolonged or repeated exposure *(state route of exposure if no other routes of exposure cause the hazard)*''. Hazard statements may be combined where appropriate to reduce the information on the label and improve readability, as long as all of the hazards are conveyed as required.

C.2.2.2 If the chemical manufacturer, importer, or responsible party can demonstrate that all or part of the hazard statement is inappropriate to a specific substance or mixture, the corresponding statement may be omitted from the label.

C.2.3 Pictograms

C.2.3.1 Pictograms shall be in the shape of a square set at a point and shall include a black hazard symbol on a white background with a red frame sufficiently wide to be clearly visible. A square red frame set at a point without a hazard symbol is not a pictogram and is not permitted on the label.

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C.2.3.2 One of eight standard hazard symbols shall be used in each pictogram. The eight hazard symbols are depicted in Figure C.1. A pictogram using the exclamation mark symbol is presented in Figure C.2, for the purpose of illustration.

Figure C.1 – Hazard Symbols and Classes

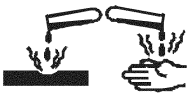
Flame	Flame Over Circle	Exclamation Mark	Exploding Bomb
Flammables Self Reactives Pyrophorics Self-heating Emits Flammable Gas Organic Peroxides	Oxidizers	Irritant Dermal Sensitizer Acute Toxicity (harmful) Narcotic Effects Respiratory Tract Irritation	Explosives Self Reactives Organic Peroxides
Corrosion	**Gas Cylinder**	**Health Hazard**	**Skull and Crossbones**
			
Corrosives	Gases Under Pressure	Carcinogen Respiratory Sensitizer Reproductive Toxicity Target Organ Toxicity Mutagenicity Aspiration Toxicity	Acute Toxicity (severe)

Figure C.2 – Exclamation Mark Pictogram

C.2.3.3 Where a pictogram required by the Department of Transportation under Title 49 of the Code of Federal Regulations appears on a shipped container, the pictogram specified in C.4 for the same hazard shall not appear.

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C.2.4 Precautionary Statement Text

C.2.4.1 There are four types of precautionary statements presented, ''prevention,'' ''response,'' ''storage,'' and ''disposal.'' The core part of the precautionary statement is presented in bold print. This is the text, except as otherwise specified, that shall appear on the label. Where additional information is required, it is indicated in plain text.

C.2.4.2 When a backslash or diagonal mark (/) appears in the precautionary statement text, it indicates that a choice has to be made between the separated phrases. In such cases, the chemical manufacturer, importer, or responsible party can choose the most appropriate phrase(s). For example, ''Wear protective gloves/protective clothing/eye protection/face protection'' could read ''wear eye protection''.

C.2.4.3 When three full stops (* * *) appear in the precautionary statement text, they indicate that all applicable conditions are not listed. For example, in ''Use explosion-proof electrical/ventilating/lighting/* * */equipment'', the use of ''* * *'' indicates that other equipment may need to be specified. In such cases, the chemical manufacturer, importer, or responsible party can choose the other conditions to be specified.

C.2.4.4 When text *in italics* is used in a precautionary statement, this indicates specific conditions applying to the use or allocation of the precautionary statement. For example, ''Use explosion-proof electrical/ventilating/lighting/* * */equipment'' is only required for flammable solids ''*if dust clouds can occur*''. Text in italics is intended to be an explanatory, conditional note and is not intended to appear on the label.

C.2.4.5 Where square brackets ([ ]) appear around text in a precautionary statement, this indicates that the text in square brackets is not appropriate in every case and should be used only in certain circumstances. In these cases, conditions for use explaining when the text should be used are provided. For example, one precautionary statement states: ''[In case of inadequate ventilation] wear respiratory protection.'' This statement is given with the condition for use ''– text in square brackets may be used if additional information is provided with the chemical at the point of use that explains what type of ventilation would be adequate for safe use''. This means that, if additional information is provided with the chemical explaining what type of ventilation would be adequate for safe use, the text in square brackets should be used and the statement would read: ''In case of inadequate ventilation wear respiratory protection.'' However, if the chemical is supplied without such ventilation information, the text in square brackets should not be used, and the precautionary statement should read: ''Wear respiratory protection.''

C.2.4.6 Precautionary statements may be combined or consolidated to save label space and improve readability. For example, ''Keep away from heat, sparks and open flame,'' ''Store in a well-ventilated place'' and ''Keep cool'' can be combined to read ''Keep away from heat, sparks and open flame and store in a cool, well-ventilated place.''

C.2.4.7 In most cases, the precautionary statements are independent (e.g., the phrases for explosive hazards do not modify those related to certain health hazards, and products that are classified for both hazard classes shall bear appropriate precautionary statements for both). Where a chemical is classified for a number of hazards, and the precautionary statements are similar, the most stringent shall be included on the label (this will be applicable mainly to preventive measures). An order of precedence may be imposed by the chemical manufacturer, importer or responsible party in situations where phrases concern ''Response.'' Rapid action may be crucial. For example, if a chemical is carcinogenic and acutely toxic, rapid action may be crucial, and first aid measures for acute toxicity will take precedence over those for long-term effects. In addition, medical attention to delayed health effects may be required in cases of incidental exposure, even if not associated with immediate symptoms of intoxication.

C.2.4.8 If the chemical manufacturer, importer, or responsible party can demonstrate that a precautionary statement is inappropriate to a specific substance or mixture, the precautionary statement may be omitted from the label.

C.3 Supplementary Hazard Information

C.3.1 To ensure that non-standardized information does not lead to unnecessarily wide variation or undermine the required information, supplementary information on the label is limited to when it provides further detail and does not contradict or cast doubt on the validity of the standardized hazard information.

C.3.2 Where the chemical manufacturer, importer, or distributor chooses to add supplementary information on the label, the placement of supplemental information shall not impede identification of information required by this section.

C.3.3 Where an ingredient with unknown acute toxicity is used in a mixture at a concentration ≥1%, and the mixture is not classified based on testing of the mixture as a whole, a statement that X% of the mixture consists of ingredient(s) of unknown acute toxicity is required on the label.

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C.4 REQUIREMENTS FOR SIGNAL WORDS, HAZARD STATEMENTS, PICTOGRAMS, AND PRECAUTIONARY STATEMENTS

C.4.1 ACUTE TOXICITY – ORAL
(Classified in Accordance with Appendix A.1)

Pictogram
Skull and crossbones

Hazard category	Signal word	Hazard statement
1	Danger	Fatal if swallowed
2	Danger	Fatal if swallowed

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Wash …thoroughly after handling. … Chemical manufacturer, importer, or distributor to specify parts of the body to be washed after handling. **Do not eat, drink or smoke when using this product.**	**If swallowed: Immediately call a poison center/doctor/…** … Chemical manufacturer, importer, or distributor to specify the appropriate source of emergency medical advice. **Specific treatment (see … on this label)** … Reference to supplemental first aid instruction. - *if immediate administration of antidote is required.* **Rinse mouth.**	**Store locked up.**	**Dispose of contents/container to…** ... in accordance with local/regional/national/international regulations (to be specified).

C.4.1 ACUTE TOXICITY – ORAL (CONTINUED)
(Classified in Accordance with Appendix A.1)

Hazard category	Signal word	Hazard statement
3	Danger	Toxic if swallowed

Pictogram
Skull and crossbones

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Wash … thoroughly after handling. … Chemical manufacturer, importer, or distributor to specify parts of the body to be washed after handling. **Do not eat, drink or smoke when using this product.**	**If swallowed: Immediately call a poison center/doctor/...** … Chemical manufacturer, importer, or distributor to specify the appropriate source of emergency medical advice. **Specific treatment (see ... on this label)** ... Reference to supplemental first aid instruction. - *if immediate administration of antidote is required.* **Rinse mouth.**	**Store locked up.**	**Dispose of contents/container to...** ... in accordance with local/regional/national/international regulations (to be specified).

C.4.1 ACUTE TOXICITY – ORAL (CONTINUED)
(Classified in Accordance with Appendix A.1)

Pictogram
Exclamation mark

Hazard category	Signal word	Hazard statement
4	Warning	Harmful if swallowed

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Wash … thoroughly after handling. … Chemical manufacturer, importer, or distributor to specify parts of the body to be washed after handling. **Do not eat, drink or smoke when using this product.**	**If swallowed: Call a poison center/doctor/…/ if you feel unwell.** … Chemical manufacturer, importer, or distributor to specify the appropriate source of emergency medical advice. **Rinse mouth.**		**Dispose of contents/container to...** ... in accordance with local/regional/national/international regulations (to be specified).

C.4.2 ACUTE TOXICITY - DERMAL
(Classified in Accordance with Appendix A.1)

Pictogram
Skull and crossbones

Hazard category	Signal word	Hazard statement
1	Danger	Fatal in contact with skin
2	Danger	Fatal in contact with skin

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Do not get in eyes, on skin, or on clothing. **Wash … thoroughly after handling.** **…** Chemical manufacturer, importer, or distributor to specify parts of the body to be washed after handling. **Do not eat, drink or smoke when using this product.** **Wear protective gloves/protective clothing.** Chemical manufacturer, importer, or distributor to specify type of equipment.	**If on skin: Wash with plenty of water/**... … Chemical manufacturer, importer, or distributor may specify a cleansing agent if appropriate, or may recommend an alternative agent in exceptional cases if water is clearly inappropriate. **Immediately call a poison center/doctor/…** … Chemical manufacturer, importer, or distributor to specify the appropriate source of emergency medical advice. **Specific treatment (see ... on this label)** ... Reference to supplemental first aid instruction. - *if immediate measures such as specific cleansing agent is advised*. **Take off immediately all contaminated clothing and wash it before reuse.**	**Store locked up.**	**Dispose of contents/container to...** ... in accordance with local/regional/national/international regulations (to be specified).

C.4.2 ACUTE TOXICITY – DERMAL (CONTINUED)
(Classified in Accordance with Appendix A.1)

Hazard category	Signal word	Hazard statement
3	Danger	Toxic in contact with skin

Pictogram
Skull and crossbones

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Wear protective gloves/protective clothing. Chemical manufacturer, importer, or distributor to specify type of equipment.	**If on skin: Wash with plenty of water/…** … Chemical manufacturer, importer, or distributor may specify a cleansing agent if appropriate, or may recommend an alternative agent in exceptional cases if water is clearly inappropriate. **Call a poison center/doctor/…/if you feel unwell.** … Chemical manufacturer, importer, or distributor to specify the appropriate source of emergency medical advice. **Specific treatment (see ... on this label)** ... Reference to supplemental first aid instruction. - *if measures such as specific cleansing agent is advised.* **Take off immediately all contaminated clothing and wash it before reuse.**	**Store locked up.**	**Dispose of contents/container to...** ... in accordance with local/regional/national/international regulations (to be specified).

C.4.2 ACUTE TOXICITY – DERMAL (CONTINUED)
(Classified in Accordance with Appendix A.1)

Pictogram
Exclamation mark

Hazard category	Signal word	Hazard statement
4	Warning	Harmful in contact with skin

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Wear protective gloves/protective clothing Chemical manufacturer, importer, or distributor to specify type of equipment.	**If on skin: Wash with plenty of water/...** … Chemical manufacturer, importer, or distributor may specify a cleansing agent if appropriate, or may recommend an alternative agent in exceptional cases if water is clearly inappropriate. **Call a poison center/doctor/…/if you feel unwell.** … Chemical manufacturer, importer, or distributor to specify the appropriate source of emergency medical advice. **Specific treatment (see ... on this label)** ... Reference to supplemental first aid instruction. - *if measures such as specific cleansing agent is advised.* **Take off contaminated clothing and wash it before reuse.**		**Dispose of contents/container to...** ... in accordance with local/regional/national/international regulations (to be specified).

C.4.3 ACUTE TOXICITY - INHALATION
(Classified in Accordance with Appendix A.1)

Hazard category	Signal word	Hazard statement
1	Danger	Fatal if inhaled
2	Danger	Fatal if inhaled

Pictogram
Skull and crossbones

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Do not breathe dust/fume/gas/mist/ vapors/spray. Chemical manufacturer, importer, or distributor to specify applicable conditions. **Use only outdoors or in a well-ventilated area.** **[In case of inadequate ventilation] wear respiratory protection.** Chemical manufacturer, importer, or distributor to specify equipment. - *Text in square brackets may be used if additional information is provided with the chemical at the point of use that explains what type of ventilation would be adequate for safe use*.	**If inhaled: Remove person to fresh air and keep comfortable for breathing.** **Immediately call a poison center/doctor/…** … Chemical manufacturer, importer, or distributor to specify the appropriate source of emergency medical advice. **Specific treatment is urgent (see ... on this label)** ... Reference to supplemental first aid instruction. - *if immediate administration of antidote is required*.	**Store in a well-ventilated place. Keep container tightly closed.** - *if product is volatile as to generate hazardous atmosphere.* **Store locked up.**	**Dispose of contents/container to...** ... in accordance with local/regional/national/international regulations (to be specified).

C.4.3 ACUTE TOXICITY – INHALATION (CONTINUED)
(Classified in Accordance with Appendix A.1)

Hazard category	Signal word	Hazard statement	Pictogram
3	Danger	Toxic if inhaled	Skull and crossbones

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Avoid breathing dust/fume/gas/mist/vapors/spray. Chemical manufacturer, importer, or distributor to specify applicable conditions. **Use only outdoors or in a well-ventilated area.**	**If inhaled: Remove person to fresh air and keep comfortable for breathing.** **Call a poison center/doctor/...** … Chemical manufacturer, importer, or distributor to specify the appropriate source of emergency medical advice. **Specific treatment (see ... on this label)** ... Reference to supplemental first aid instruction. - *if immediate specific measures are required.*	**Store in a well-ventilated place. Keep container tightly closed.** - *if product is volatile so as to generate hazardous atmosphere.* **Store locked up.**	**Dispose of content/container to…** … in accordance with local/regional/national/international regulations (to be specified).

C.4.3 ACUTE TOXICITY – INHALATION (CONTINUED)
(Classified in Accordance with Appendix A.1)

Hazard category	Signal word	Hazard statement
4	Warning	Harmful if inhaled

Pictogram
Exclamation mark

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Avoid breathing dust/fume/gas/mist/vapors/spray. Chemical manufacturer, importer, or distributor to specify applicable conditions. **Use only outdoors or in a well-ventilated area.**	**If inhaled: Remove person to fresh air and keep comfortable for breathing.** **Call a poison center/doctor/…/if you feel unwell.** … Chemical manufacturer, importer, or distributor to specify the appropriate source of emergency medical advice.		

C.4.4 SKIN CORROSION/IRRITATION
(Classified in Accordance with Appendix A.2)

Pictogram
Corrosion

Hazard category	Signal word	Hazard statement
1A to 1C	Danger	Causes severe skin burns and eye damage

Precautionary statements

Prevention	Response	Storage	Disposal
Do not breathe dusts or mists. - *if inhalable particles of dusts or mists may occur during use.* **Wash …thoroughly after handling.** **…**Chemical manufacturer, importer, or distributor to specify parts of the body to be washed after handling. **Wear protective gloves/protective clothing/eye protection/face protection.** Chemical manufacturer, importer, or distributor to specify type of equipment.	**If swallowed: Rinse mouth. Do NOT induce vomiting.** **If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.** **Wash contaminated clothing before reuse.** **If inhaled: Remove person to fresh air and keep comfortable for breathing.** **Immediately call a poison center/doctor/…** … Chemical manufacturer, importer, or distributor to specify the appropriate source of emergency medical advice. **Specific treatment (see ... on this label)** ... Reference to supplemental first aid instruction. - *Manufacturer, importer, or distributor may specify a cleansing agent if appropriate.* **If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**	**Store locked up.**	**Dispose of contents/container to...** ... in accordance with local/regional/national/international regulations (to be specified).

C.4.4 SKIN CORROSION/IRRITATION (CONTINUED)
(Classified in Accordance with Appendix A.2)

Pictogram
Exclamation mark

Hazard category	Signal word	Hazard statement
2	Warning	Causes skin irritation

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Wash … thoroughly after handling. … Chemical manufacturer, importer, or distributor to specify parts of the body to be washed after handling. **Wear protective gloves.** Chemical manufacturer, importer, or distributor to specify type of equipment.	**If on skin: Wash with plenty of water/**... … Chemical manufacturer, importer, or distributor may specify a cleansing agent if appropriate, or may recommend an alternative agent in exceptional cases if water is clearly inappropriate. **Specific treatment (see ... on this label)** ... Reference to supplemental first aid instruction. - *Manufacturer, importer, or distributor may specify a cleansing agent if appropriate.* **If skin irritation occurs: Get medical advice/attention.** **Take off contaminated clothing and wash it before reuse.**		

C.4.5 EYE DAMAGE/IRRITATION
(Classified in Accordance with Appendix A.3)

Pictogram
Corrosion

Hazard category	Signal word	Hazard statement
1	Danger	Causes serious eye damage

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Wear eye protection/face protection. Chemical manufacturer, importer, or distributor to specify type of equipment.	**If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.** **Immediately call a poison center/doctor/…** … Chemical manufacturer, importer, or distributor to specify the appropriate source of emergency medical advice.		

C.4.5 EYE DAMAGE/IRRITATION (CONTINUED)
(Classified in Accordance with Appendix A.3)

Hazard category	Signal word	Hazard statement
2A	Warning	Causes serious eye irritation

Pictogram
Exclamation mark

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Wash … thoroughly after handling. … Chemical manufacturer, importer, or distributor to specify parts of the body to be washed after handling. **Wear eye protection/face protection.** Chemical manufacturer, importer, or distributor to specify type of equipment.	**If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.** **If eye irritation persists: Get medical advice/attention.**		

C.4.5 EYE DAMAGE/IRRITATION (CONTINUED)
(Classified in Accordance with Appendix A.3)

Pictogram
No Pictogram

Hazard category	Signal word	Hazard statement
2B	Warning	Causes eye irritation

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Wash … thoroughly after handling. … Chemical manufacturer, importer, or distributor to specify parts of the body to be washed after handling.	**If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.** **If eye irritation persists: Get medical advice/attention.**		

C.4.6 SENSITIZATION - RESPIRATORY
(Classified in Accordance with Appendix A.4)

Pictogram
Health hazard

Hazard category	Signal word	Hazard statement
1 (including both sub-categories 1A and 1B)	Danger	May cause allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary statements

Prevention	Response	Storage	Disposal
Avoid breathing dust/fume/gas/mist/ vapors/spray. Chemical manufacturer, importer, or distributor to specify applicable conditions. **[In case of inadequate ventilation] wear respiratory protection.** Chemical manufacturer, importer, or distributor to specify equipment - *Text in square brackets may be used if additional information is provided with the chemical at the point of use that explains what type of ventilation would be adequate for safe use*.	**If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.** **If experiencing respiratory symptoms: Call a poison center/doctor/…** … Chemical manufacturer, importer, or distributor to specify the appropriate source of emergency medical advice.		**Dispose of contents/container to...** ... in accordance with local/regional/national/international regulations (to be specified).

C.4.7 SENSITIZATION - SKIN
(Classified in Accordance with Appendix A.4)

Pictogram
Exclamation mark

Hazard category	Signal word	Hazard statement
1 (including both sub-categories 1A and 1B)	Warning	May cause an allergic skin reaction

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Avoid breathing dust/fume/gas/mist/vapors/spray. Chemical manufacturer, importer, or distributor to specify applicable conditions. **Contaminated work clothing must not be allowed out of the workplace.** **Wear protective gloves.** Chemical manufacturer, importer, or distributor to specify type of equipment.	**If on skin: Wash with plenty of water/**... … Chemical manufacturer, importer, or distributor may specify a cleansing agent if appropriate, or may recommend an alternative agent in exceptional cases if water is clearly inappropriate. **If skin irritation or rash occurs: Get medical advice/attention.** **Specific treatment (see ... on this label)** ... Reference to supplemental first aid instruction. - *Manufacturer, importer, or distributor may specify a cleansing agent if appropriate.* **Wash contaminated clothing before reuse.**		**Dispose of contents/container to...** ... in accordance with local/regional/national/international regulations (to be specified).

C.4.8 GERM CELL MUTAGENICITY
(Classified in Accordance with Appendix A.5)

Pictogram
Health hazard

Hazard category	**Signal word**	Hazard statement
1A and 1B	Danger	May cause genetic defects <...>
2	Warning	Suspected of causing genetic defects <...>
		(state route of exposure if no other routes of exposure cause the hazard)

Precautionary statements

Prevention	**Response**	**Storage**	**Disposal**
Obtain special instructions before use. **Do not handle until all safety precautions have been read and understood.** **Wear protective gloves/protective clothing/eye protection/face protection.** Chemical manufacturer, importer, or distributor to specify type of equipment, as required.	**If exposed or concerned: Get medical advice/attention.**	**Store locked up.**	**Dispose of contents/container to...** ... in accordance with local/regional/national/international regulations (to be specified).

C.4.9 CARCINOGENICITY
(Classified in Accordance with Appendix A.6)

Pictogram
Health hazard

Hazard category	Signal word	Hazard statement
1A and 1B	Danger	May cause cancer <...>
2	Warning	Suspected of causing cancer <...>
		(state route of exposure if no other routes of exposure cause the hazard)

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Obtain special instructions before use. **Do not handle until all safety precautions have been read and understood.** **Wear protective gloves/protective clothing/eye protection/face protection.** Chemical manufacturer, importer, or distributor to specify type of equipment, as required.	**If exposed or concerned: Get medical advice/attention.**	**Store locked up.**	**Dispose of contents/container to...** ... in accordance with local/regional/national/international regulations (to be specified).

Note: If a Category 2 carcinogen ingredient is present in the mixture at a concentration between 0.1% and 1%, information is required on the SDS for a product; however, a label warning is optional. If a Category 2 carcinogen ingredient is present in the mixture at a concentration of ≥ 1%, both an SDS and a label is required and the information must be included on each.

C.4.10 TOXIC TO REPRODUCTION
(Classified in Accordance with Appendix A.7)

Pictogram
Health hazard

Hazard category	Signal word	Hazard statement
1A and 1B	Danger	May damage fertility or the unborn child <...> <<...>>
2	Warning	Suspected of damaging fertility or the unborn child <...> <<...>> *(state specific effect if known)* *(state route of exposure if no other routes of exposure cause the hazard)*

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Obtain special instructions before use. **Do not handle until all safety precautions have been read and understood.** **Wear protective gloves/protective clothing/eye protection/face protection.** Chemical manufacturer, importer, or distributor to specify type of equipment, as required.	**If exposed or concerned: Get medical advice/attention.**	**Store locked up.**	**Dispose of contents/container to...** ... in accordance with local/regional/national/international regulations (to be specified).

C.4.10 TOXIC TO REPRODUCTION (CONTINUED)
(Classified in Accordance with Appendix A.7)
(EFFECTS ON OR VIA LACTATION)

Pictogram
No Pictogram

Hazard category	Signal word	Hazard statement
No designated number	*No signal word*	May cause harm to breast-fed children

(See Table A.7.1 in Appendix A.7)

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Obtain special instructions before use. **Do not breathe dusts or mists.** - *if inhalable particles of dusts or mists may occur during use.* **Avoid contact during pregnancy/while nursing.** **Wash … thoroughly after handling.** **…**Chemical manufacturer, importer, or distributor to specify parts of the body to be washed after handling. **Do not eat, drink or smoke when using this product.**	**If exposed or concerned: Get medical advice/attention.**		

C.4.11 SPECIFIC TARGET ORGAN TOXICITY (Single Exposure)
(Classified in Accordance with Appendix A.8)

Pictogram
Health hazard

Hazard category	Signal word	Hazard statement
1	Danger	Causes damage to organs <...> <<...>> <...> *(or state all organs affected if known)* <<...>> *(state route of exposure if no other routes of exposure cause the hazard)*

Precautionary statements

Prevention	Response	Storage	Disposal
Do not breathe dust/fume/gas/mist/ vapors/spray. Chemical manufacturer, importer, or distributor to specify applicable conditions. **Wash …thoroughly after handling.** … Chemical manufacturer, importer, or distributor to specify parts of the body to be washed after handling. **Do not eat, drink or smoke when using this product.**	**If exposed: Call a poison center/doctor/…** … Chemical manufacturer, importer, or distributor to specify the appropriate source of emergency medical advice. **Specific treatment (see ... on this label)** ... Reference to supplemental first aid instruction. - *if immediate measures are required*.	**Store locked up.**	**Dispose of contents/container to...** ... in accordance with local/regional/national/international regulations (to be specified).

C.4.11 SPECIFIC TARGET ORGAN TOXICITY (Single Exposure) (CONTINUED)
(Classified in Accordance with Appendix A.8)

Pictogram
Health hazard

Hazard category	Signal word	Hazard statement
2	Warning	May cause damage to organs <...> <<...>> <...> *(or state all organs affected, if known)* <<...>> *(state route of exposure if no other routes of exposure cause the hazard)*

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Do not breathe dust/fume/gas/mist/vapors/spray. Chemical manufacturer, importer, or distributor to specify applicable conditions. **Wash … thoroughly after handling.** … Chemical manufacturer, importer, or distributor to specify parts of the body to be washed after handling. **Do not eat, drink or smoke when using this product.**	**If exposed or concerned: Call a poison center/doctor/…** … Chemical manufacturer, importer, or distributor to specify the appropriate source of emergency medical advice.	**Store locked up.**	**Dispose of contents/container to...** ... in accordance with local/regional/national/international regulations (to be specified).

C.4.11 SPECIFIC TARGET ORGAN TOXICITY (Single Exposure) (CONTINUED)
(Classified in Accordance with Appendix A.8)

Pictogram
Exclamation mark

Hazard category	Signal word	Hazard statement
3	Warning	May cause respiratory irritation; or May cause drowsiness or dizziness

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Avoid breathing dust/fume/gas/mist/ vapors/spray. Chemical manufacturer, importer, or distributor to specify applicable conditions. **Use only outdoors or in a well-ventilated area.**	**If inhaled: Remove person to fresh air and keep comfortable for breathing.** **Call a poison center/doctor/…/if you feel unwell.** … Chemical manufacturer, importer, or distributor to specify the appropriate source of emergency medical advice.	**Store in a well-ventilated place. Keep container tightly closed.** - *if product is volatile so as to generate hazardous atmosphere.* **Store locked up.**	**Dispose of contents/container to...** ... in accordance with local/regional/national/international regulations (to be specified).

C.4.12 SPECIFIC TARGET ORGAN TOXICITY (Repeated Exposure) (Classified in Accordance with Appendix A.9)

Pictogram
Health hazard

Hazard category	Signal word	Hazard statement
1	Danger	Causes damage to organs <...> through prolonged or repeated exposure <<...>> <...> *(state all organs affected, if known)* <<...>> *(state route of exposure if no other routes of exposure cause the hazard)*

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Do not breathe dust/fume/gas/mist/vapors/spray. Chemical manufacturer, importer, or distributor to specify applicable conditions. **Wash … thoroughly after handling.** …Chemical manufacturer, importer, or distributor to specify parts of the body to be washed after handling. **Do not eat, drink or smoke when using this product.**	**Get medical advice/attention if you feel unwell.**		**Dispose of contents/container to...** ... in accordance with local/regional/national/international regulations (to be specified).

C.4.12 SPECIFIC TARGET ORGAN TOXICITY (Repeated Exposure) (CONTINUED)
(Classified in Accordance with Appendix A.9)

Pictogram
Health hazard

Hazard category	Signal word	Hazard statement
2	Warning	May cause damage to organs <...> through prolonged or repeated exposure <<...>> <...> *(state all organs affected, if known)* <<...>> *(state route of exposure if no other routes of exposure cause the hazard)*

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Do not breathe dust/fume/gas/mist/vapors/spray. Chemical manufacturer, importer, or distributor to specify applicable conditions.	**Get medical advice/attention if you feel unwell.**		**Dispose of contents/container to...** ... in accordance with local/regional/national/international regulations (to be specified).

C.4.13 ASPIRATION HAZARD
(Classified in Accordance with Appendix A.10)

Pictogram
Health hazard

Hazard category	Signal word	Hazard statement
1	Danger	May be fatal if swallowed and enters airways

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
	If swallowed: Immediately call a poison center/doctor/… … Chemical manufacturer, importer, or distributor to specify the appropriate source of emergency medical advice. **Do NOT induce vomiting.**	**Store locked up.**	**Dispose of contents/container to...** ... in accordance with local/regional/national/international regulations (to be specified).

C.4.14 EXPLOSIVES
(Classified in Accordance with Appendix B.1)

Hazard category	Signal word	Hazard statement
Unstable explosive	Danger	Unstable explosive

Pictogram

Exploding bomb

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Obtain special instructions before use. **Do not handle until all safety precautions have been read and understood.** **Wear personal protective equipment/face protection.** Chemical manufacturer, importer, or distributor to specify type of equipment, as required.	**Explosion risk in case of fire.** **Do NOT fight fire when fire reaches explosives.** **Evacuate area.**	**Store ...** …in accordance with local/regional/ national/international regulations (to be specified).	**Dispose of contents/container to ...** …in accordance with local/regional/ national/international regulations (to be specified).

C.4.14 EXPLOSIVES (CONTINUED)
(Classified in Accordance with Appendix B.1)

Pictogram
Exploding bomb

Hazard category	Signal word	Hazard statement
Division 1.1	Danger	Explosive; mass explosion hazard
Division 1.2	Danger	Explosive; severe projection hazard
Division 1.3	Danger	Explosive; fire, blast or projection hazard

Precautionary statements

Prevention	Response	Storage	Disposal
Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Chemical manufacturer, importer, or distributor to specify applicable ignition source(s). **Keep wetted with...** … Chemical manufacturer, importer, or distributor to specify appropriate material. - *if drying out increases explosion hazard, except as needed for manufacturing or operating processes (e.g., nitrocellulose).* **Ground/bond container and receiving equipment.** - *if the explosive is electrostatically sensitive.* **Do not subject to grinding/shock/…/friction.** …Chemical manufacturer, importer, or distributor to specify applicable rough handling. **Wear face protection.** Chemical manufacturer, importer, or distributor to specify type of equipment.	**In case of fire: evacuate area.** **Explosion risk in case of fire.** **Do NOT fight fire when fire reaches explosives.**	**Store ...** …in accordance with local/regional/national/ international regulations (to be specified).	**Dispose of contents/container to ...** … in accordance with local/ regional/national/ international regulations (to be specified).

Note: Unpackaged explosives or explosives repacked in packagings other than the original or similar packaging shall have the label elements assigned to Division 1.1 unless the hazard is shown to correspond to one of the hazard categories in Appendix B.1, in which case the corresponding symbol, signal word and/or the hazard statement shall be assigned.

C.4.14 EXPLOSIVES (CONTINUED)
(Classified in Accordance with Appendix B.1)

Pictogram
Exploding bomb[1]

Hazard category	Signal word	Hazard statement
Division 1.4	Warning	Fire or projection hazard

Precautionary statements[1]			
Prevention	**Response**	**Storage**	**Disposal**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Chemical manufacturer, importer, or distributor to specify applicable ignition source(s). **Ground/bond container and receiving equipment.** - *if the explosive is electrostatically sensitive.* **Do not subject to grinding/shock/…/friction.** Chemical manufacturer, importer, or distributor to specify applicable rough handling. **Wear face protection.** Chemical manufacturer, importer, or distributor to specify type of equipment.	**In case of fire: Evacuate area.** **Explosion risk in case of fire.** - *except if explosives are 1.4S ammunition and components thereof.* **Do NOT fight fire when fire reaches explosives.** **Fight fire with normal precautions from a reasonable distance** - *if explosives are 1.4S ammunition and components thereof.*	**Store ...** …in accordance with local/regional/national/international regulations (to be specified).	**Dispose of contents/container to...** … in accordance with local/regional/national/international regulations (to be specified).

Note: Unpackaged explosives or explosives repacked in packagings other than the original or similar packaging shall have the label elements assigned to Division 1.1 unless the hazard is shown to correspond to one of the hazard categories in Appendix B.1, in which case the corresponding symbol, signal word and/or the hazard statement shall be assigned.[1]

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[1] *Except no pictogram is required for explosives that are 1.4S small arms ammunition and components thereof. Labels for 1.4S small arms ammunition and components shall include appropriate precautionary statements.*

C.4.14 EXPLOSIVES (CONTINUED)
(Classified in Accordance with Appendix B.1)

Pictogram
No pictogram

Hazard category	Signal word	Hazard statement
Division 1.5	Danger	May mass explode in fire

Precautionary statements

Prevention	Response	Storage	Disposal
Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Chemical manufacturer, importer, or distributor to specify applicable ignition source(s). **Keep wetted with**... … Chemical manufacturer, importer, or distributor to specify appropriate material. **-** *if drying out increases explosion hazard, except as needed for manufacturing or operating processes (e.g., nitrocellulose).* **Ground/bond container and receiving equipment** - *if the explosive is electrostatically sensitive.* **Do not subject to grinding/shock/…/friction.** **…**Chemical manufacturer, importer, or distributor to specify applicable rough handling. **Wear face protection.** Chemical manufacturer, importer, or distributor to specify type of equipment.	**In case of fire: Evacuate area.** **Explosion risk in case of fire.** **Do NOT fight fire when fire reaches explosives.**	**Store ...** …in accordance with local/regional/ national/international regulations (to be specified).	**Dispose of contents/container to ...** … in accordance with local/regional/ national/international regulations (to be specified).

Note: Unpackaged explosives or explosives repacked in packagings other than the original or similar packaging shall have the label elements assigned to Division 1.1 unless the hazard is shown to correspond to one of the hazard categories in Appendix B.1, in which case the corresponding symbol, signal word and/or the hazard statement shall be assigned.

C.4.14 EXPLOSIVES (CONTINUED)
(Classified in Accordance with Appendix B.1)

Pictogram
No pictogram

Hazard category	Signal word	Hazard statement
Division 1.6	*No signal word*	*No hazard statement*

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
None assigned.	None assigned	None assigned	None assigned

Note: Unpackaged explosives or explosives repacked in packagings other than the original or similar packaging shall have the label elements assigned to Division 1.1 unless the hazard is shown to correspond to one of the hazard categories in Appendix B.1, in which case the corresponding symbol, signal word and/or the hazard statement shall be assigned.

C.4.15 FLAMMABLE GASES
(Classified in Accordance with Appendix B.2)

Pictogram
Flame

Hazard category	Signal word	Hazard statement
1	Danger	Extremely flammable gas

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Keep away from heat/sparks/open flames/hot surfaces. -No smoking. Chemical manufacturer, importer, or distributor to specify applicable ignition source(s).	**Leaking gas fire: Do not extinguish, unless leak can be stopped safely.** **Eliminate all ignition sources if safe to do so.**	**Store in well-ventilated place.**	

C.4.15 FLAMMABLE GASES (CONTINUED)
(Classified in Accordance with Appendix B.2)

Pictogram
No Pictogram

Hazard category	Signal word	Hazard statement
2	Warning	Flammable gas

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Keep away from heat/sparks/open flames/hot surfaces. -No smoking. Chemical manufacturer, importer, or distributor to specify applicable ignition sources(s).	**Leaking gas fire: Do not extinguish, unless leak can be stopped safely.** **Eliminate all ignition sources if safe to do so.**	**Store in well-ventilated place.**	

C.4.16 FLAMMABLE AEROSOLS
(Classified in Accordance with Appendix B.3)

Hazard category	Signal word	Hazard statement
1	Danger	Extremely flammable aerosol
2	Warning	Flammable aerosol

Pictogram
Flame

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Keep away from heat/sparks/open flames/hot surfaces. -No smoking. Chemical manufacturer, importer, or distributor to specify applicable ignition sources(s). **Do not spray on an open flame or other ignition source.** **Pressurized container: Do not pierce or burn, even after use.**		**Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.**	

C.4.17 OXIDIZING GASES
(Classified in Accordance with Appendix B.4)

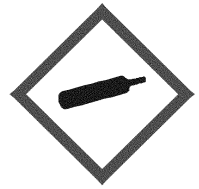
Hazard category	Signal word	Hazard statement
1	Danger	May cause or intensify fire; oxidizer

Pictogram
Flame over circle

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Keep/Store away from clothing/…/combustible materials. …Chemical manufacturer, importer, or distributor to specify other incompatible materials. **Keep reduction valves/valves and fittings free from oil and grease.**	**In case of fire: Stop leak if safe to do so.**	**Store in well-ventilated place.**	

C.4.18 GASES UNDER PRESSURE
(Classified in Accordance with Appendix B.5)

Pictogram
Gas cylinder



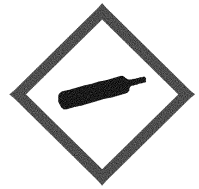
Hazard category	Signal word	Hazard statement
Compressed gas	Warning	Contains gas under pressure; may explode if heated
Liquefied gas	Warning	Contains gas under pressure; may explode if heated
Dissolved gas	Warning	Contains gas under pressure; may explode if heated

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
		Protect from sunlight. Store in a well-ventilated place.	

C.4.18 GASES UNDER PRESSURE (CONTINUED)
(Classified in Accordance with Appendix B.5)

Hazard category	Signal word	Hazard statement
Refrigerated liquefied gas	Warning	Contains refrigerated gas; may cause cryogenic burns or injury

Pictogram
Gas cylinder



Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Wear cold insulating gloves/face shield/eye protection.	**Thaw frosted parts with lukewarm water. Do not rub affected area.** **Get immediate medical advice/attention**	**Store in well-ventilated place.**	

C.4.19 FLAMMABLE LIQUIDS
(Classified in Accordance with Appendix B.6)

Pictogram
Flame

Hazard category	Signal word	Hazard statement
1	Danger	Extremely flammable liquid and vapor
2	Danger	Highly flammable liquid and vapor
3	Warning	Flammable liquid and vapor

Precautionary statements

Prevention	Response	Storage	Disposal
Keep away from heat/sparks/open flames/hot surfaces.– No smoking. Chemical manufacturer, importer, or distributor to specify applicable ignition source(s). **Keep container tightly closed.** **Ground/Bond container and receiving equipment** - *if electrostatically sensitive material is for reloading*. - *if product is volatile so as to generate hazardous atmosphere*. **Use explosion-proof electrical/ventilating/ lighting/.../equipment.** ... Chemical manufacturer, importer, or distributor to specify other equipment. **Use only non-sparking tools.** **Take precautionary measures against static discharge.** **Wear protective gloves/eye protection/face protection** Chemical manufacturer, importer, or distributor to specify type of equipment.	**If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.** **In case of fire: Use ... to extinguish.** ... Chemical manufacturer, importer, or distributor to specify appropriate media. - *if water increases risk.*	**Store in a well-ventilated place. Keep cool.**	**Dispose of contents/container to...** … in accordance with local/regional/national/ international regulations (to be specified).

C.4.19 FLAMMABLE LIQUIDS (CONTINUED)
(Classified in Accordance with Appendix B.6)

Pictogram
No Pictogram

Hazard category	Signal word	Hazard statement
4	Warning	Combustible liquid

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Keep away from flames and hot surfaces. – No smoking. **Wear protective gloves/eye protection/face protection** Chemical manufacturer, importer, or distributor to specify type of equipment.	**In case of fire: Use ... to extinguish.** ... Chemical manufacturer, importer, or distributor to specify appropriate media. - *if water increases risk.*	**Store in a well-ventilated place. Keep cool.**	**Dispose of contents/container to...** in accordance with local/regional/national/international regulations (to be specified).

C.4.20 FLAMMABLE SOLIDS
(Classified in Accordance with Appendix B.7)

Pictogram
Flame

Hazard category	Signal word	Hazard statement
1	Danger	Flammable solid
2	Warning	Flammable solid

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Chemical manufacturer, importer, or distributor to specify applicable ignition source(s). **Ground/Bond container and receiving equipment.** - *if electrostatically sensitive material is for reloading*. **Use explosion-proof electrical/ventilating/ lighting/... /equipment.** ... Chemical manufacturer, importer, or distributor to specify other equipment. - *if dust clouds can occur*. **Wear protective gloves/eye protection/face protection** Chemical manufacturer, importer, or distributor to specify type of equipment.	**In case of fire: Use ... to extinguish** ... Chemical manufacturer, importer, or distributor to specify appropriate media. - *if water increases risk*.		

C.4.21 SELF-REACTIVE SUBSTANCES AND MIXTURES
(Classified in Accordance with Appendix B.8)

Pictogram
Exploding bomb

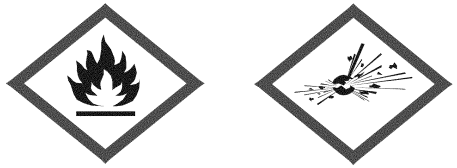
Hazard category	Signal word	Hazard statement
Type A	Danger	Heating may cause an explosion

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Chemical manufacturer, importer, or distributor to specify applicable ignition source(s). **Keep/Store away from clothing/…/combustible materials.** **...** Chemical manufacturer, importer, or distributor to specify other incompatible materials. **Keep only in original container.** **Wear protective gloves/eye protection/face protection.** Chemical manufacturer, importer, or distributor to specify type of equipment.	**In case of fire: Use ... to extinguish** ... Chemical manufacturer, importer, or distributor to specify appropriate media. - *if water increases risk.* **In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.**	**Store in a well-ventilated place. Keep cool.** **Store at temperatures not exceeding …°C/…°F.** ... Chemical manufacturer, importer, or distributor to specify temperature. **Store away from other materials.**	**Dispose of contents/container to...** … in accordance with local/regional/national/international regulations (to be specified).

C.4.21 SELF-REACTIVE SUBSTANCES AND MIXTURES (CONTINUED)
(Classified in Accordance with Appendix B.8)

Hazard category	Signal word	Hazard statement
Type B	Danger	Heating may cause a fire or explosion

Pictograms
Exploding bomb and flame



Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Chemical manufacturer, importer, or distributor to specify applicable ignition source(s). **Keep/Store away from clothing/.../combustible materials.** ... Chemical manufacturer, importer, or distributor to specify other incompatible materials. **Keep only in original container.** **Wear protective gloves/eye protection/face protection.** Chemical manufacturer, importer, or distributor to specify type of equipment.	**In case of fire: Use ... to extinguish.** ... Chemical manufacturer, importer, or distributor to specify appropriate media. - *if water increases risk*. **In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.**	**Store in a well-ventilated place. Keep cool.** **Store at temperatures not exceeding …°C/…°F.** ... Chemical manufacturer, importer, or distributor to specify temperature. **Store away from other materials.**	**Dispose of contents/container to**... …in accordance with local/regional/national/international regulations (to be specified).

C.4.21 SELF-REACTIVE SUBSTANCES AND MIXTURES(CONTINUED)
(Classified in Accordance with Appendix B.8)

Hazard category	Signal word	Hazard statement
Type C	Danger	Heating may cause a fire
Type D	Danger	Heating may cause a fire
Type E	Warning	Heating may cause a fire
Type F	Warning	Heating may cause a fire

Pictogram
Flame

Precautionary statements

Prevention	Response	Storage	Disposal
Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Chemical manufacturer, importer, or distributor to specify applicable ignition source(s). **Keep/Store away from clothing/…/combustible materials.** …Chemical manufacturer, importer, or distributor to specify other incompatible materials. **Keep only in original container.** **Wear protective gloves/eye protection/face protection.** Chemical manufacturer, importer, or distributor to specify type of equipment.	**In case of fire: Use ... to extinguish** ... Chemical manufacturer, importer, or distributor to specify appropriate media. - *if water increases risk.*	**Store in a well-ventilated place. Keep cool.** **Store at temperatures not exceeding …°C/…°F.** ...Chemical manufacturer, importer, or distributor to specify temperature. **Store away from other materials.**	**Dispose of contents/container to...** …in accordance with local/regional/national/international regulations (to be specified).

C.4.22 PYROPHORIC LIQUIDS
(Classified in Accordance with Appendix B.9)

Hazard category	Signal word	Hazard statement
1	Danger	Catches fire spontaneously if exposed to air

Pictogram
Flame

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Chemical manufacturer, importer, or distributor to specify applicable ignition sources(s). **Do not allow contact with air.** **Wear protective gloves/eye protection/face protection.** Chemical manufacturer, importer, or distributor to specify type of equipment.	**If on skin: Immerse in cool water/wrap with wet bandages** **In case of fire: Use ... to extinguish** ... Chemical manufacturer, importer, or distributor to specify appropriate media. - *if water increases risk.*	**Store contents under ...** ... Chemical manufacturer, importer, or distributor to specify appropriate liquid or inert gas.	

C.4.23 PYROPHORIC SOLIDS
(Classified in Accordance with Appendix B.10)

Pictogram
Flame

Hazard category	Signal word	Hazard statement
1	Danger	Catches fire spontaneously if exposed to air

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Chemical manufacturer, importer, or distributor to specify applicable ignition source(s). **Do not allow contact with air.** **Wear protective gloves/eye protection/face protection** Chemical manufacturer, importer, or distributor to specify type of equipment.	**Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.** **In case of fire: Use ... to extinguish** ... Chemical manufacturer, importer, or distributor to specify appropriate media. - *if water increases risk*.	**Store contents under ...** …Chemical manufacturer, importer, or distributor to specify appropriate liquid or inert gas.	

C.4.24 SELF-HEATING SUBSTANCES AND MIXTURES
(Classified in Accordance with Appendix B.11)

Hazard category	Signal word	Hazard statement
1	Danger	Self-heating; may catch fire
2	Warning	Self-heating in large quantities; may catch fire

Pictogram
Flame

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Keep cool. Protect from sunlight. **Wear protective gloves/eye protection/face protection.** Chemical manufacturer, importer, or distributor to specify type of equipment.		**Maintain air gap between stacks/pallets.** **Store bulk masses greater than … kg/…lbs at temperatures not exceeding …°C/…°F.** ... Chemical manufacturer, importer, or distributor to specify mass and temperature. **Store away from other materials.**	

C.4.25 SUBSTANCES AND MIXTURES WHICH, IN CONTACT WITH WATER, EMIT FLAMMABLE GASES (Classified in Accordance with Appendix B.12)

Pictogram
Flame

Hazard category	Signal word	Hazard statement
1	Danger	In contact with water releases flammable gases, which may ignite spontaneously
2	Danger	In contact with water releases flammable gas

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Do not allow contact with water. **Handle under inert gas. Protect from moisture.** **Wear protective gloves/eye protection/face protection.** Chemical manufacturer, importer, or distributor to specify type of equipment.	**Brush off loose particles from skin and immerse in cool water/wrap in wet bandages.** **In case of fire: Use ... to extinguish** ... Chemical manufacturer, importer, or distributor to specify appropriate media. - *if water increases risk*.	**Store in a dry place. Store in a closed container.**	**Dispose of contents/container to...** …in accordance with local/regional/national/ international regulations (to be specified).

C.4.25 SUBSTANCES AND MIXTURES WHICH, IN CONTACT WITH WATER, EMIT FLAMMABLE GASES (CONTINUED)

(Classified in Accordance with Appendix B.12)

Hazard category	Signal word	Hazard statement
3	Warning	In contact with water releases flammable gas

Pictogram
Flame

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Handle under inert gas. Protect from moisture. **Wear protective gloves/eye protection/face protection.** Chemical manufacturer, importer, or distributor to specify type of equipment.	**In case of fire: Use ... to extinguish.** ... Chemical manufacturer, importer, or distributor to specify appropriate media. - *if water increases risk*.	**Store in a dry place. Store in a closed container.**	**Dispose of contents/container to...** ... in accordance with local/regional/national/international regulations (to be specified).

C.4.26 OXIDIZING LIQUIDS
(Classified in Accordance with Appendix B.13)

Hazard category	Signal word	Hazard statement
1	Danger	May cause fire or explosion; strong oxidizer

Pictogram
Flame over circle

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Keep away from heat. **Keep/Store away from clothing and other combustible materials.** **Take any precaution to avoid mixing with combustibles/...** ... Chemical manufacturer, importer, or distributor to specify other incompatible materials. **Wear protective gloves /eye protection/face protection.** Chemical manufacturer, importer, or distributor to specify type of equipment. **Wear fire/flame resistant/retardant clothing.**	**If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.** **In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.** **In case of fire: Use ... to extinguish.** ... Chemical manufacturer, importer, or distributor to specify appropriate media. - *if water increases risk*.		**Dispose of contents/container to...** …in accordance with local/regional/national/international regulations (to be specified).

C.4.26 OXIDIZING LIQUIDS (CONTINUED)
(Classified in Accordance with Appendix B.13)

Hazard category	Signal word	Hazard statement
2	Danger	May intensify fire; oxidizer
3	Warning	May intensify fire; oxidizer

Pictogram
Flame over circle

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Keep away from heat. **Keep/Store away from clothing/…/combustible materials.** **…**Chemical manufacturer, importer, or distributor to specify other incompatible materials. **Take any precaution to avoid mixing with combustibles/...** ... Chemical manufacturer, importer, or distributor to specify other incompatible materials. **Wear protective gloves/eye protection/face protection.** Chemical manufacturer, importer, or distributor to specify type of equipment.	**In case of fire: Use ... to extinguish.** ... Chemical manufacturer, importer, or distributor to specify appropriate media. - *if water increases risk*.		**Dispose of contents/container to...** …in accordance with local/regional/national/international regulations (to be specified).

C.4.27 OXIDIZING SOLIDS
(Classified in Accordance with Appendix B.14)

Hazard category	Signal word	Hazard statement
1	Danger	May cause fire or explosion; strong oxidizer

Pictogram
Flame over circle

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Keep away from heat. **Keep away from clothing and other combustible materials.** **Take any precaution to avoid mixing with combustibles/...** …Chemical manufacturer, importer, or distributor to specify other incompatible materials. **Wear protective gloves/eye protection/face protection.** Chemical manufacturer, importer, or distributor to specify type of equipment. **Wear fire/flame resistant/retardant clothing.**	**If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.** **In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.** **In case of fire: Use ... to extinguish.** ... Chemical manufacturer, importer, or distributor to specify appropriate media. - *if water increases risk*.		**Dispose of contents/container to...** …in accordance with local/regional/national/international regulations (to be specified).

C.4.27 OXIDIZING SOLIDS (CONTINUED)
(Classified in Accordance with Appendix B.14)

Hazard category	Signal word	Hazard statement
2	Danger	May intensify fire; oxidizer
3	Warning	May intensify fire; oxidizer

Pictogram
Flame over circle

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Keep away from heat. **Keep/Store away from clothing/…/ combustible materials.** … Chemical manufacturer, importer, or distributor to specify incompatible materials. **Take any precaution to avoid mixing with combustibles/...** …Chemical manufacturer, importer, or distributor to specify other incompatible materials. **Wear protective gloves/eye protection/face protection.** Chemical manufacturer, importer, or distributor to specify type of equipment.	**In case of fire: Use ... to extinguish.** ... Chemical manufacturer, importer, or distributor to specify appropriate media. - *if water increases risk*.		**Dispose of contents/container to...** ... in accordance with local/regional/national/international regulations (to be specified).

C.4.28 ORGANIC PEROXIDES
(Classified in Accordance with Appendix B.15)

Pictogram
Exploding bomb

Hazard category	Signal word	Hazard statement
Type A	Danger	Heating may cause an explosion

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Keep away from heat/sparks/open flames/hot surfaces.- No smoking. Chemical manufacturer, importer, or distributor to specify applicable ignition source(s). **Keep/Store away from clothing/…/combustible materials.** ... Chemical manufacturer, importer, or distributor to specify incompatible materials. **Keep only in original container.** **Wear protective gloves/eye protection/face protection.** Chemical manufacturer, importer, or distributor to specify type of equipment.		**Store at temperatures not exceeding …°C/…°F. Keep cool.** ... Chemical manufacturer, importer, or distributor to specify temperature. **Protect from sunlight.** **Store away from other materials.**	**Dispose of contents/container to...** ... in accordance with local/regional/national/international regulations (to be specified).

C.4.28 ORGANIC PEROXIDES (CONTINUED)
(Classified in Accordance with Appendix B.15)

Hazard category	Signal word	Hazard statement
Type B	Danger	Heating may cause a fire or explosion

Pictograms

Exploding bomb and flame

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Chemical manufacturer, importer, or distributor to specify applicable ignition source(s). **Keep /Store away from clothing/.../combustible materials.** ... Chemical manufacturer, importer, or distributor to specify incompatible materials. **Keep only in original container.** **Wear protective gloves/eye protection/face protection.** Chemical manufacturer, importer, or distributor to specify type of equipment.		**Store at temperatures not exceeding …°C/…°F. Keep cool.** Chemical manufacturer, importer, or distributor to specify temperature. **Protect from sunlight.** **Store away from other materials.**	**Dispose of contents/container to...** ... in accordance with local/regional/national/international regulations (to be specified).

C.4.28 ORGANIC PEROXIDES (CONTINUED)
(Classified in Accordance with Appendix B.15)

Pictogram
Flame

Hazard category	Signal word	Hazard statement
Type C	Danger	Heating may cause a fire
Type D	Danger	Heating may cause a fire
Type E	Warning	Heating may cause a fire
Type F	Warning	Heating may cause a fire

Precautionary statements

Prevention	Response	Storage	Disposal
Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Chemical manufacturer, importer, or distributor to specify applicable ignition source(s). **Keep/Store away from clothing/.../ combustible materials** ... Chemical manufacturer, importer, or distributor to specify incompatible materials. **Keep only in original container.** **Wear protective gloves/eye protection/face protection.** Chemical manufacturer, importer, or distributor to specify type of equipment.		**Store at temperatures not exceeding …°C/…°F. Keep cool.** ... Chemical manufacturer, importer, or distributor to specify temperature. **Protect from sunlight.** **Store away from other materials.**	**Dispose of contents/container to...** ... in accordance with local/regional/national/international regulations (to be specified).

C.4.29 CORROSIVE TO METALS
(Classified in Accordance with Appendix B.16)

Pictogram
Corrosion

Hazard category	Signal word	Hazard statement
1	Warning	May be corrosive to metals

Precautionary statements			
Prevention	**Response**	**Storage**	**Disposal**
Keep only in original container.	**Absorb spillage to prevent material damage.**	**Store in corrosive resistant/... container with a resistant inner liner.** ... Chemical manufacturer, importer, or distributor to specify other compatible materials.	

C.4.30 Label elements for OSHA defined hazards

Hazard	Signal word	Hazard statement	Pictogram
Pyrophoric Gas	Danger	Catches fire spontaneously if exposed to air	Flame
Simple Asphyxiant	Warning	May displace oxygen and cause rapid suffocation	*No Pictogram*
Combustible Dust[2]	Warning	May form combustible dust concentrations in air	*No Pictogram*

[2] *The chemical manufacturer or importer shall label chemicals that are shipped in dust form, and present a combustible dust hazard in that form when used downstream, under paragraph (f)(1); 2) the chemical manufacturer or importer shipping chemicals that are in a form that is not yet a dust must provide a label to customers under paragraph (f)(4) if, under normal conditions of use, the chemicals are processed in a downstream workplace in such a way that they present a combustible dust hazard; and 3) the employer shall follow the workplace labeling requirements under paragraph (f)(6) where combustible dust hazards are present.*

Appendix D to § 1910.1200—Safety Data Sheets (Mandatory)

A safety data sheet (SDS) shall include the information specified in Table D.1 under the section number and heading indicated for sections 1–11 and 16. If no relevant information is found for any given subheading within a section, the SDS shall clearly indicate that no applicable information is available. Sections 12–15 may be included in the SDS, but are not mandatory.

TABLE D.1—MINIMUM INFORMATION FOR AN SDS

Heading	Subheading
1. Identification	(a) Product identifier used on the label; (b) Other means of identification; (c) Recommended use of the chemical and restrictions on use; (d) Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party; (e) Emergency phone number.
2. Hazard(s) identification	(a) Classification of the chemical in accordance with paragraph (d) of § 1910.1200; (b) Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of § 1910.1200. (Hazard symbols may be provided as graphical reproductions in black and white or the name of the symbol, e.g., flame, skull and crossbones); (c) Describe any hazards not otherwise classified that have been identified during the classification process; (d) Where an ingredient with unknown acute toxicity is used in a mixture at a concentration ≥1% and the mixture is not classified based on testing of the mixture as a whole, a statement that X% of the mixture consists of ingredient(s) of unknown acute toxicity is required.
3. Composition/information on ingredients	Except as provided for in paragraph (i) of § 1910.1200 on trade secrets: For Substances (a) Chemical name; (b) Common name and synonyms; (c) CAS number and other unique identifiers; (d) Impurities and stabilizing additives which are themselves classified and which contribute to the classification of the substance. For Mixtures In addition to the information required for substances: (a) The chemical name and concentration (exact percentage) or concentration ranges of all ingredients which are classified as health hazards in accordance with paragraph (d) of § 1910.1200 and (1) Are present above their cut-off/concentration limits; or (2) Present a health risk below the cut-off/concentration limits. (b) The concentration (exact percentage) shall be specified unless a trade secret claim is made in accordance with paragraph (i) of § 1910.1200, when there is batch-to-batch variability in the production of a mixture, or for a group of substantially similar mixtures (*See* A.0.5.1.2) with similar chemical composition. In these cases, concentration ranges may be used. For All Chemicals Where a Trade Secret is Claimed Where a trade secret is claimed in accordance with paragraph (i) of § 1910.1200, a statement that the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret is required.
4. First-aid measures	(a) Description of necessary measures, subdivided according to the different routes of exposure, i.e., inhalation, skin and eye contact, and ingestion; (b) Most important symptoms/effects, acute and delayed. (c) Indication of immediate medical attention and special treatment needed, if necessary.
5. Fire-fighting measures	(a) Suitable (and unsuitable) extinguishing media. (b) Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products). (c) Special protective equipment and precautions for fire-fighters.
6. Accidental release measures	(a) Personal precautions, protective equipment, and emergency procedures. (b) Methods and materials for containment and cleaning up.
7. Handling and storage	(a) Precautions for safe handling. (b) Conditions for safe storage, including any incompatibilities.
8. Exposure controls/personal protection	(a) OSHA permissible exposure limit (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available. (b) Appropriate engineering controls. (c) Individual protection measures, such as personal protective equipment.
9. Physical and chemical properties	(a) Appearance (physical state, color, etc.); (b) Odor; (c) Odor threshold; (d) pH; (e) Melting point/freezing point; (f) Initial boiling point and boiling range; (g) Flash point; (h) Evaporation rate; (i) Flammability (solid, gas); (j) Upper/lower flammability or explosive limits;

TABLE D.1—MINIMUM INFORMATION FOR AN SDS—Continued

Heading	Subheading
	(k) Vapor pressure; (l) Vapor density; (m) Relative density; (n) Solubility(ies); (o) Partition coefficient: n-octanol/water; (p) Auto-ignition temperature; (q) Decomposition temperature; (r) Viscosity.
10. Stability and reactivity	(a) Reactivity; (b) Chemical stability; (c) Possibility of hazardous reactions; (d) Conditions to avoid (e.g., static discharge, shock, or vibration); (e) Incompatible materials; (f) Hazardous decomposition products.
11. Toxicological information	Description of the various toxicological (health) effects and the available data used to identify those effects, including: (a) Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact); (b) Symptoms related to the physical, chemical and toxicological characteristics; (c) Delayed and immediate effects and also chronic effects from short- and long-term exposure; (d) Numerical measures of toxicity (such as acute toxicity estimates). (e) Whether the hazardous chemical is listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition), or by OSHA.
12. Ecological information (Non-mandatory)	(a) Ecotoxicity (aquatic and terrestrial, where available); (b) Persistence and degradability; (c) Bioaccumulative potential; (d) Mobility in soil; (e) Other adverse effects (such as hazardous to the ozone layer).
13. Disposal considerations (Non-mandatory)	Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging.
14. Transport information (Non-mandatory)	(a) UN number; (b) UN proper shipping name; (c) Transport hazard class(es); (d) Packing group, if applicable; (e) Environmental hazards (e.g., Marine pollutant (Yes/No)); (f) Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code); (g) Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises.
15. Regulatory information (Non-mandatory)	Safety, health and environmental regulations specific for the product in question.
16. Other information, including date of preparation or last revision.	The date of preparation of the SDS or the last change to it.

Appendix F to § 1910.1200—Guidance for Hazard Classifications Re: Carcinogenicity (Non-Mandatory)

The mandatory criteria for classification of a chemical for carcinogenicity under HCS (§ 1910.1200) are found in Appendix A.6 to this section. This non-mandatory Appendix provides additional guidance on hazard classification for carcinogenicity. Part A of Appendix F includes background guidance provided by GHS based on the Preamble of the International Agency for Research on Cancer (IARC) ''Monographs on the Evaluation of Carcinogenic Risks to Humans'' (2006). Part B provides IARC classification information. Part C provides background guidance from the National Toxicology Program (NTP) ''Report on Carcinogens'' (RoC), and Part D is a table that compares GHS carcinogen hazard categories to carcinogen classifications under IARC and NTP, allowing classifiers to be able to use information from IARC and NTP RoC carcinogen classifications to complete their classifications under the GHS, and thus the HCS.

Part A: Background Guidance [1]

As noted in Footnote 6 of Appendix A.6. to this section, the GHS includes as guidance for classifiers information taken from the Preamble of the International Agency for Research on Cancer (IARC) ''Monographs on the Evaluation of Carcinogenic Risks to Humans'' (2006), providing guidance on the evaluation of the strength and evidence of carcinogenic risks to humans. This guidance also discusses some additional considerations in classification and an approach to analysis, rather than hard-and-fast rules. Part A is consistent with Appendix A.6, and should help in evaluating information to determine carcinogenicity.

Carcinogenicity in humans:

The evidence relevant to carcinogenicity from studies in humans is classified into one of the following categories:

(a) Sufficient evidence of carcinogenicity: A causal relationship has been established between exposure to the agent and human cancer. That is, a positive relationship has been observed between the exposure and cancer in studies in which chance, bias and confounding could be ruled out with reasonable confidence.

(b) Limited evidence of carcinogenicity: A positive association has been observed between exposure to the agent and cancer for which a causal interpretation is considered by the Working Group to be credible, but chance, bias or confounding could not be ruled out with reasonable confidence.

In some instances, the above categories may be used to classify the degree of evidence related to carcinogenicity in specific organs or tissues.

Carcinogenicity in experimental animals:

The evidence relevant to carcinogenicity in experimental animals is classified into one of the following categories:

[1] *The text of Appendix F, Part A, on the IARC Monographs, is paraphrased from the 2006 Preamble to the ''Monographs on the Evaluation of Carcinogenic Risks to Humans''; the Classifier is referred to the full IARC Preamble for the complete text. The text is not part of the agreed GHS text on the harmonized system developed by the OECD Task Force-HCL.*

(a) Sufficient evidence of carcinogenicity: A causal relationship has been established between the agent and an increased incidence of malignant neoplasms or of an appropriate combination of benign and malignant neoplasms in two or more species of animals or two or more independent studies in one species carried out at different times or in different laboratories or under different protocols. An increased incidence of tumors in both sexes of a single species in a well-conducted study, ideally conducted under Good Laboratory Practices, can also provide sufficient evidence.

Exceptionally, a single study in one species and sex might be considered to provide sufficient evidence of carcinogenicity when malignant neoplasms occur to an unusual degree with regard to incidence, site, type of tumor or age at onset, or when there are strong findings of tumors at multiple sites.

(a) Limited evidence of carcinogenicity: The data suggest a carcinogenic effect but are limited for making a definitive evaluation because, e.g. the evidence of carcinogenicity is restricted to a single experiment; there are unresolved questions regarding the adequacy of the design, conduct or interpretation of the studies; the agent increases the incidence only of benign neoplasms or lesions of uncertain neoplastic potential; or the evidence of carcinogenicity is restricted to studies that demonstrate only promoting activity in a narrow range of tissues or organs.

Guidance on How To Consider Important Factors in Classification of Carcinogenicity (See Reference Section)

The weight of evidence analysis called for in GHS and the HCS (§ 1910.1200) is an integrative approach that considers important factors in determining carcinogenic potential along with the strength of evidence analysis. The IPCS ''*Conceptual Framework for Evaluating a Mode of Action for Chemical Carcinogenesis''* (2001), International Life Sciences Institute (ILSI) ''*Framework for Human Relevance Analysis of Information on Carcinogenic Modes of Action''* (Meek, *et al.,* 2003; Cohen *et al.,* 2003, 2004), and Preamble to the IARC Monographs (2006; Section B.6. (Scientific Review and Evaluation; Evaluation and Rationale)) provide a basis for systematic assessments that may be performed in a consistent fashion. The IPCS also convened a panel in 2004 to further develop and clarify the human relevance framework. However, the above documents are not intended to dictate answers, nor provide lists of criteria to be checked off.

Mode of Action

Various documents on carcinogen assessment all note that mode of action in and of itself, or consideration of comparative metabolism, should be evaluated on a case-by-case basis and are part of an analytic evaluative approach. One must look closely at any mode of action in animal experiments, taking into consideration comparative toxicokinetics/toxicodynamics between the animal test species and humans to determine the relevance of the results to humans. This may lead to the possibility of discounting very specific effects of certain types of substances. Life stage-dependent effects on cellular differentiation may also lead to qualitative differences between animals and humans. Only if a mode of action of tumor development is conclusively determined not to be operative in humans may the carcinogenic evidence for that tumor be discounted. However, a weight of evidence evaluation for a substance calls for any other tumorigenic activity to be evaluated, as well.

Responses in Multiple Animal Experiments

Positive responses in several species add to the weight of evidence that a substance is a carcinogen. Taking into account all of the factors listed in A.6.2.5.2 and more, such chemicals with positive outcomes in two or more species would be provisionally considered to be classified in GHS Category 1B until human relevance of animal results are assessed in their entirety. It should be noted, however, that positive results for one species in at least two independent studies, or a single positive study showing unusually strong evidence of malignancy may also lead to Category 1B.

Responses Are in One Sex or Both Sexes

Any case of gender-specific tumors should be evaluated in light of the total tumorigenic response to the substance observed at other sites (multi-site responses or incidence above background) in determining the carcinogenic potential of the substance.

If tumors are seen only in one sex of an animal species, the mode of action should be carefully evaluated to see if the response is consistent with the postulated mode of action. Effects seen only in one sex in a test species may be less convincing than effects seen in both sexes, unless there is a clear patho-physiological difference consistent with the mode of action to explain the single sex response.

Confounding Effects of Excessive Toxicity or Localized Effects

Tumors occurring only at excessive doses associated with severe toxicity generally have doubtful potential for carcinogenicity in humans. In addition, tumors occurring only at sites of contact and/or only at excessive doses need to be carefully evaluated for human relevance for carcinogenic hazard. For example, forestomach tumors, following administration by gavage of an irritating or corrosive, non-mutagenic chemical, may be of questionable relevance. However, such determinations must be evaluated carefully in justifying the carcinogenic potential for humans; any occurrence of other tumors at distant sites must also be considered.

Tumor Type, Reduced Tumor Latency

Unusual tumor types or tumors occurring with reduced latency may add to the weight of evidence for the carcinogenic potential of a substance, even if the tumors are not statistically significant.

Toxicokinetic behavior is normally assumed to be similar in animals and humans, at least from a qualitative perspective. On the other hand, certain tumor types in animals may be associated with toxicokinetics or toxicodynamics that are unique to the animal species tested and may not be predictive of carcinogenicity in humans. Very few such examples have been agreed internationally. However, one example is the lack of human relevance of kidney tumors in male rats associated with compounds causing α2u-globulin nephropathy (IARC, Scientific Publication N° 147 [2]). Even when a particular tumor type may be discounted, expert judgment must be used in assessing the total tumor profile in any animal experiment.

Part B: International Agency for Research on Cancer (IARC) [3]

IARC Carcinogen Classification Categories:

Group 1: The agent is *carcinogenic to humans*

This category is used when there is *sufficient evidence of carcinogenicity* in humans. Exceptionally, an agent may be placed in this category when evidence of carcinogenicity in humans is less than *sufficient* but there is *sufficient evidence of carcinogenicity* in experimental animals and strong evidence in exposed humans that the agent acts through a relevant mechanism of carcinogenicity.

Group 2:

This category includes agents for which, at one extreme, the degree of evidence of carcinogenicity in humans is almost *sufficient,* as well as those for which, at the other extreme, there are no human data but for which there is evidence of carcinogenicity in experimental animals. Agents are assigned to either Group 2A (*probably carcinogenic to humans*) or Group 2B (*possibly carcinogenic to humans*) on the basis of epidemiological and experimental evidence of carcinogenicity and mechanistic and other relevant data. The terms *probably carcinogenic* and *possibly carcinogenic* have no quantitative significance and are used simply as descriptors of different levels of evidence of human carcinogenicity, with *probably carcinogenic* signifying a higher level of evidence than *possibly carcinogenic.*

Group 2A: The agent is *probably carcinogenic to human.*

This category is used when there is *limited evidence of carcinogenicity* in humans and *sufficient evidence of carcinogenicity* in experimental animals. In some cases, an agent may be classified in this category when there is *inadequate evidence of carcinogenicity* in humans and *sufficient evidence of carcinogenicity* in experimental animals and strong evidence that the carcinogenesis is mediated by a mechanism that also operates in humans. Exceptionally, an agent may be classified in this category solely on the basis of *limited evidence of carcinogenicity* in humans. An agent may be assigned to this category if it clearly belongs, based on mechanistic considerations, to a class of agents for which one or more members have been classified in Group 1 or Group 2A.

[2] *While most international agencies do not consider kidney tumors coincident with α2u-globulin nephropathy to be a predictor of risk in humans, this view is not universally held. (See: Doi et al., 2007).*

[3] *Preamble of the International Agency for Research on Cancer (IARC) ''Monographs on the Evaluation of Carcinogenic Risks to Humans'' (2006).*

Group 2B: The agent is *possibly carcinogenic to humans.*

This category is used for agents for which there is *limited evidence of carcinogenicity* in humans and less than *sufficient evidence of carcinogenicity* in experimental animals. It may also be used when there is *inadequate evidence of carcinogenicity* in humans but there is *sufficient evidence of carcinogenicity* in experimental animals. In some instances, an agent for which there is *inadequate evidence of carcinogenicity* in humans and less than *sufficient evidence of carcinogenicity* in experimental animals together with supporting evidence from mechanistic and other relevant data may be placed in this group. An agent may be classified in this category solely on the basis of strong evidence from mechanistic and other relevant data.

Part C: National Toxicology Program (NTP), ''Report on Carcinogens'', Background Guidance

NTP Listing Criteria [4]*:*

The criteria for listing an agent, substance, mixture, or exposure circumstance in the Report on Carcinogens (RoC) are as follows:

Known To Be A Human Carcinogen: There is sufficient evidence of carcinogenicity from studies in humans [5] that indicates a causal relationship between exposure to the agent, substance, or mixture, and human cancer.

Reasonably Anticipated To Be A Human Carcinogen: There is limited evidence of carcinogenicity from studies in humans that indicates that a causal interpretation is credible, but that alternative explanations, such as chance, bias, or confounding factors, could not adequately be excluded,

or

there is sufficient evidence of carcinogenicity from studies in experimental animals that indicates there is an increased incidence of malignant and/or a combination of malignant and benign tumors in multiple species or at multiple tissue sites, or by multiple routes of exposure, or to an unusual degree with regard to incidence, site, or type of tumor, or age at onset,

or

there is less than sufficient evidence of carcinogenicity in humans or laboratory animals; however, the agent, substance, or mixture belongs to a well-defined, structurally-related class of substances whose members are listed in a previous Report on Carcinogens as either known to be a human carcinogen or reasonably anticipated to be a human carcinogen, or there is convincing relevant information that the agent acts through mechanisms indicating it would likely cause cancer in humans.

Conclusions regarding carcinogenicity in humans or experimental animals are based on scientific judgment, with consideration given to all relevant information. Relevant information includes, but is not limited to, dose response, route of exposure, chemical structure, metabolism, pharmacokinetics, sensitive sub-populations, genetic effects, or other data relating to mechanism of action or factors that may be unique to a given substance. For example, there may be substances for which there is evidence of carcinogenicity in laboratory animals, but there are compelling data indicating that the agent acts through mechanisms that do not operate in humans and would therefore not reasonably be anticipated to cause cancer in humans.

Part D: Table Relating Approximate Equivalences Among IARC, NTP RoC, and GHS Carcinogenicity Classifications

The following table may be used to perform hazard classifications for carcinogenicity under the HCS (§ 1910.1200). It relates the approximated GHS hazard categories for carcinogenicity to the classifications provided by IARC and NTP, as described in Parts B and C of this Appendix.

APPROXIMATE EQUIVALENCES AMONG CARCINOGEN CLASSIFICATION SCHEMES

IARC	GHS	NTP RoC
Group 1	Category 1A	Known.
Group 2A	Category 1B	Reasonably Anticipated.
Group 2B	Category 2	(See Note 1).

Note 1:

1. *Limited evidence of carcinogenicity from studies in humans (corresponding to IARC 2A/GHS 1B);*
2. *Sufficient evidence of carcinogenicity from studies in experimental animals (again, essentially corresponding to IARC 2A/GHS 1B);*
3. *Less than sufficient evidence of carcinogenicity in humans or laboratory animals; however:*

c. *The agent, substance, or mixture belongs to a well-defined, structurally-related class of substances whose members are listed in a previous RoC as either ''Known'' or ''Reasonably Anticipated'' to be a human carcinogen, or*

d. *There is convincing relevant information that the agent acts through mechanisms indicating it would likely cause cancer in humans.*

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* * * * *

■ 33. Amend § 1910.1450 as follows:

■ A. Remove the definitions of *Combustible liquid, Compressed gas, Explosive, Flammable, Flashpoint, Organic peroxide, Oxidizer, Unstable (reactive),* and *Water-reactive* from paragraph (b);

■ B. Revise the definitions of *Hazardous chemical, Physical hazard, and Reproductive toxins* in paragraph (b);

■ C. Add definitions of *Health hazard* and *Mutagen* in alphabetical order in paragraph (b);

[4] *See: http://ntp.niehs.nih.gov/go/15209.*

[5] *This evidence can include traditional cancer epidemiology studies, data from clinical studies, and/or data derived from the study of tissues or cells from humans exposed to the substance in question that can be useful for evaluating whether a relevant cancer mechanism is operating in people.*

■ D. In paragraphs (f)(3)(v), (h)(1) introductory text, (h)(1)(ii) and (h)(2)(iii), remove the phrases ''Material Safety Data Sheets'' and ''material safety data sheets'' and add in their place ''safety data sheets'';

■ E. In Appendix A to § 1910.1450, in the Table of Contents (item ''G'') remove ''Material Safety Data Sheets'' and add in its place ''Safety Data Sheets'';

■ F. In Appendix A to § 1910.1450, revise the heading ''G. Material Safety Data Sheets'' and revise the text following the heading.

The revisions read as follows:

§ 1910.1450 Occupational exposure to hazardous chemicals in laboratories.

* * * * *

(b) * * *

Hazardous chemical means any chemical which is classified as health hazard or simple asphyxiant in accordance with the Hazard Communication Standard (§ 1910.1200).

Health hazard means a chemical that is classified as posing one of the following hazardous effects: Acute toxicity (any route of exposure); skin corrosion or irritation; serious eye damage or eye irritation; respiratory or skin sensitization; germ cell mutagenicity; carcinogenity; reproductive toxicity; specific target organ toxicity (single or repeated exposure); aspiration hazard. The criteria for determining whether a chemical is classified as a health hazard are detailed in Appendix A of the Hazard Communication Standard (§ 1910.1200) and § 1910.1200(c) (definition of ''simple asphyxiant'').

* * * * *

Mutagen means chemicals that cause permanent changes in the amount or structure of the genetic material in a cell. Chemicals classified as mutagens in accordance with the Hazard Communication Standard (§ 1910.1200) shall be considered mutagens for purposes of this section.

* * * * *

Physical hazard means a chemical that is classified as posing one of the following hazardous effects: Explosive; flammable (gases, aerosols, liquids, or solids); oxidizer (liquid, solid, or gas); self reactive; pyrophoric (gas, liquid or solid); self-heating; organic peroxide; corrosive to metal; gas under pressure; in contact with water emits flammable gas; or combustible dust. The criteria for determining whether a chemical is classified as a physical hazard are in Appendix B of the Hazard Communication Standard (§ 1910.1200) and § 1910.1200(c) (definitions of ''combustible dust'' and ''pyrophoric gas'').

* * * * *

Reproductive toxins mean chemicals that affect the reproductive capabilities including adverse effects on sexual function and fertility in adult males and females, as well as adverse effects on the development of the offspring. Chemicals classified as reproductive toxins in accordance with the Hazard Communication Standard (§ 1910.1200) shall be considered reproductive toxins for purposes of this section.

* * * * *

Appendix A to § 1910.1450—National Research Council Recommendations Concerning Chemical Hygiene in Laboratories (Non-Mandatory)

* * * * *

G. Safety Data Sheets

Safety data sheets are presented in ''Prudent Practices'' for the chemicals listed below. (Asterisks denote that comprehensive safety data sheets are provided).

* * * * *

PART 1915—OCCUPATIONAL SAFETY AND HEALTH STANDARDS FOR SHIPYARD EMPLOYMENT

■ 34. Revise the authority citation for part 1915 to read as follows:

Authority: Section 41, Longshore and Harbor Workers' Compensation Act (33 U.S.C. 941); Sections. 4, 6, and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); Secretary of Labor's Order No. 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736), 1–90 (55 FR 9033), 6–96 (62 FR 111), 3–2000 (65 FR 50017), 5–2002 (67 FR 65008), 5–2007 (72 FR 31160), 4–2010 (75 FR 55355), or 1–2012 (77 FR 3912), as applicable; 29 CFR Part 1911.

Section 1915.100 also issued under 49 U.S.C. 1801–1819 and 5 U.S.C. 553.

Sections 1915.120 and 1915.152 of 29 CFR also issued under 29 CFR part 1911.

Subpart Z—[Amended]

■ 35. Revise § 1915.1001 paragraphs (i)(3), (k)(7), and (k)(8) to read as follows:

§ 1915.1001 Asbestos.

* * * * *

(i) * * *

(3) The employer shall ensure that contaminated clothing is transported in sealed impermeable bags, or other closed, impermeable containers, and labeled in accordance with paragraph (k) of this section.

* * * * *

(k) * * *

(7) *Hazard communication.* (i) Labels shall be affixed to all products containing asbestos and to all containers containing such products, including waste containers. Where feasible, installed asbestos products shall contain a visible label.

(ii) *General.* The employer shall include asbestos in the program established to comply with the Hazard Communication Standard (HCS) (§ 1910.1200). The employer shall ensure that each employee has access to labels on containers of asbestos and safety data sheets, and is trained in accordance with the provisions of the HCS and paragraph (k)(9) of this section. The employer shall ensure that at least the following hazards are addressed: Cancer and lung effects.

(iii) *Labels.* (A) The employer shall ensure that labels of bags or containers of protective clothing and equipment, scrap, waste, and debris containing asbestos fibers bear the following information:

DANGER
CONTAINS ASBESTOS FIBERS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
DO NOT BREATHE DUST
AVOID CREATING DUST

(B)(*1*) Prior to June 1, 2015, employers may include the following information on raw materials, mixtures or labels of bags or containers of protective clothing and equipment, scrap, waste, and debris containing asbestos fibers in lieu of the labeling requirements in paragraphs (k)(7)(ii) and (k)(7)(iii)(A) of this section:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

(*2*) Labels shall also contain a warning statement against breathing asbestos fibers.

(iv) The provisions for labels required in paragraph (k)(7) of this section do not apply where:

(A) Asbestos fibers have been modified by a bonding agent, coating, binder, or other material, provided that the manufacturer can demonstrate that, during any reasonably foreseeable use, handling, storage, disposal, processing, or transportation, no airborne concentrations of asbestos fibers in excess of the permissible exposure limit and/or excursion limit will be released, or

(B) Asbestos is present in a product in concentrations less than 1.0 percent.

(8) *Signs.* (i) Warning signs that demarcate the regulated area shall be provided and displayed at each location where a regulated area is required to be established by paragraph (e) of this section. Signs shall be posted at such a distance from such a location that an

employee may read the signs and take necessary protective steps before entering the area marked by the signs.

(ii) The warning signs required by this paragraph (k)(8) shall bear the following legend:

DANGER
ASBESTOS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
AUTHORIZED PERSONNEL ONLY

(iii) In addition, where the use of respirators and protective clothing is required in the regulated area under this section, the warning signs shall include the following:

WEAR RESPIRATORY PROTECTION
AND PROTECTIVE CLOTHING IN THIS
AREA

(iv) The employer shall ensure that employees working in and contiguous to regulated areas comprehend the warning signs required to be posted by paragraph (k)(8) of this section. Means to ensure employee comprehension may include the use of foreign languages, pictographs, and graphics.

(v) When a building/vessel owner or employer identifies previously installed PACM and/or ACM, labels or signs shall be affixed or posted so that employees will be notified of what materials contain PACM and/or ACM. The employer shall attach such labels in areas where they will clearly be noticed by employees who are likely to be exposed, such as at the entrance to mechanical room/areas. Signs required by paragraph (k)(6) of this section may be posted in lieu of labels, so long as they contain information required for labeling. The employer shall ensure, to the extent feasible, that employees who come in contact with these signs or labels can comprehend them. Means to ensure employee comprehension may include the use of foreign languages, pictographs, graphics, and awareness training.

(vi) Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (k)(8)(ii) of this section:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY

(vii) Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (k)(8)(iii) of this section:

RESPIRATORS AND PROTECTIVE
CLOTHING ARE REQUIRED IN THIS
AREA

* * * * *

■ 36. Revise § 1915.1026 paragraphs (g)(2)(iv) and (j)(1), to read as follows:

§ 1915.1026 Chromium (VI).

* * * * *

(g) * * *

(2) * * *

(iv) The employer shall ensure that bags or containers of contaminated protective clothing or equipment that are removed from change rooms for laundering, cleaning, maintenance, or disposal are labeled in accordance with the requirements of the Hazard Communication Standard, § 1910.1200.

* * * * *

(j) * * *

(1) *Hazard communication.* The employer shall include chromium (VI) in the program established to comply with the Hazard Communication Standard (HCS) (§ 1910.1200). The employer shall ensure that each employee has access to labels on containers of chromium (VI) and safety data sheets, and is trained in accordance with the provisions of HCS and paragraph (j)(2) of this section. The employer shall ensure that at least the following hazards are addressed: Cancer; skin sensitization; and eye irritation.

* * * * *

PART 1926—SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION

Subpart D—[Amended]

■ 37. The authority citation for subpart D is revised to read as follows:

Authority: Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704); Sections 4, 6, and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, and 657); and Secretary of Labor's Order No. 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736), 1–90 (55 FR 9033), 6–96 (62 FR 111), 3–2000 (65 FR 50017), 5–2002 (67 FR 65008), 5–2007 (72 FR 31159), 4–2010 (75 FR 55355), or 1–2012 (77 FR 3912) as applicable; and 29 CFR part 1911.

Sections 1926.58, 1926.59, 1926.60, and 1926.65 also issued under 5 U.S.C. 553 and 29 CFR part 1911.

Section 1926.61 also issued under 49 U.S.C. 1801–1819 and 6 U.S.C. 553.

Section 1926.62 also issued under section 1031 of the Housing and Community Development Act of 1992 (42 U.S.C. 4853).

Section 1926.65 also issued under section 126 of the Superfund Amendments and Reauthorization Act of 1986, as amended (reprinted at 29 U.S.C.A. 655 Note), and 5 U.S.C. 553.

■ 38. Revise § 1926.60 paragraphs (l)(1) and (l)(2) to read as follows:

§ 1926.60 Methylenedianiline.

* * * * *

(l) * * *

(1) *Hazard communication.* The employer shall include Methylenedianiline (MDA) in the program established to comply with the Hazard Communication Standard (HCS) (§ 1910.1200). The employer shall ensure that each employee has access to labels on containers of MDA and safety data sheets, and is trained in accordance with the provisions of HCS and paragraph (l)(3) of this section. The employer shall ensure that at least the following hazards are addressed: Cancer; liver effects; and skin sensitization.

(2) *Signs and labels*— (i) *Signs.* (A) The employer shall post and maintain legible signs demarcating regulated areas and entrances or access-ways to regulated areas that bear the following legend:

DANGER
MDA
MAY CAUSE CANCER
CAUSES DAMAGE TO THE LIVER
RESPIRATORY PROTECTION AND
PROTECTIVE CLOTHING MAY BE
REQUIRED IN THIS AREA
AUTHORIZED PERSONNEL ONLY

(B) Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (l)(2)(i)(A) of this section:

DANGER
MDA
MAY CAUSE CANCER
LIVER TOXIN
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE
CLOTHING MAY BE REQUIRED TO BE
WORN IN THIS AREA

(ii) *Labels.* (A) The employer shall ensure that labels or other appropriate forms of warning are provided for containers of MDA within the workplace. The labels shall comply with the requirements of § 1910.1200(f) and shall include at least the following information for pure MDA and mixtures containing MDA:

DANGER
CONTAINS MDA
MAY CAUSE CANCER
CAUSES DAMAGE TO THE LIVER

(B) Prior to June 1, 2015, employers may include the following information workplace labels in lieu of the labeling requirements in paragraph (l)(2)(ii)(A) of this section:

(*1*) For Pure MDA:

DANGER
CONTAINS MDA
MAY CAUSE CANCER
LIVER TOXIN

(*2*) For mixtures containing MDA:

DANGER
CONTAINS MDA
CONTAINS MATERIALS WHICH MAY
CAUSE CANCER

LIVER TOXIN
* * * * *

■ 39. Amend § 1926.62 by revising paragraph (g)(2)(vii), the heading of paragraph (l), paragraph (l)(1)(i), and paragraph (m), and Appendix B to § 1926.62 section XI, to read as follows:

§ 1926.62 Lead.

* * * * *

(g) * * *

(2) * * *

(vii)(A) The employer shall ensure that the containers of contaminated protective clothing and equipment required by paragraph (g)(2)(v) of this section are labeled as follows:

DANGER: CLOTHING AND EQUIPMENT CONTAMINATED WITH LEAD. MAY DAMAGE FERTILITY OR THE UNBORN CHILD. CAUSES DAMAGE TO THE CENTRAL NERVOUS SYSTEM. DO NOT EAT, DRINK OR SMOKE WHEN HANDLING. DO NOT REMOVE DUST BY BLOWING OR SHAKING. DISPOSE OF LEAD CONTAMINATED WASH WATER IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, OR FEDERAL REGULATIONS.

(B) Prior to June 1, 2015, employers may include the following information on bags or containers of contaminated protective clothing and equipment required by paragraph (g)(2)(v) in lieu of the labeling requirements in paragraph (g)(2)(vii)(A) of this section:

Caution: Clothing contaminated with lead. Do not remove dust by blowing or shaking. Dispose of lead contaminated wash water in accordance with applicable local, state, or federal regulations.

* * * * *

(l) *Communication of hazards.*

(1) * * *

(i) *Hazard communication.* The employer shall include lead in the program established to comply with the Hazard Communication Standard (HCS) (§ 1910.1200). The employer shall ensure that each employee has access to labels on containers of lead and safety data sheets, and is trained in accordance with the provisions of HCS and paragraph (l) of this section. The employer shall ensure that at least the following hazards are addressed:

(A) Reproductive/developmental toxicity;

(B) Central nervous system effects;

(C) Kidney effects;

(D) Blood effects; and

(E) Acute toxicity effects.

* * * * *

(m) *Signs.*

(1) *General.*

(i) The employer shall post the following warning signs in each work area where an employee's exposure to lead is above the PEL.

DANGER
LEAD WORK AREA
MAY DAMAGE FERTILITY OR THE UNBORN CHILD
CAUSES DAMAGE TO THE CENTRAL NERVOUS SYSTEM
DO NOT EAT, DRINK OR SMOKE IN THIS AREA

(ii) The employer shall ensure that no statement appears on or near any sign required by this paragraph (m) that contradicts or detracts from the meaning of the required sign.

(iii) The employer shall ensure that signs required by this paragraph (m) are illuminated and cleaned as necessary so that the legend is readily visible.

(iv) The employer may use signs required by other statutes, regulations or ordinances in addition to, or in combination with, signs required by this paragraph (m).

(v) Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (m)(1)(i) of this section:

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING

* * * * *

Appendix B to § 1926.62—Employee Standard Summary

* * * * *

XI. Signs—Paragraph (M)

The standard requires that the following warning sign be posted in work areas when the exposure to lead is above the PEL:

DANGER
LEAD WORK AREA
MAY DAMAGE FERTILITY OR THE UNBORN CHILD
CAUSES DAMAGE TO THE CENTRAL NERVOUS SYSTEM
DO NOT EAT, DRINK OR SMOKE IN THIS AREA

Prior to June 1, 2016, employers may use the following legend in lieu of that specified above:

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING

* * * * *

■ 40. Revise § 1926.64 paragraphs (a)(1)(ii) introductory text, (a)(1)(ii)(B), and (d)(1)(vii), and the note following paragraph (d)(1)(vii), to read as follows:

§ 1926.64 Process safety management of highly hazardous chemicals.

* * * * *

(a) * * *

(1) * * *

(ii) A process which involves a Category 1 flammable gas (as defined in § 1910.1200(c)) or flammable liquid with a flashpoint below 100 °F (37.8 °C) on site in one location, in a quantity of 10,000 pounds (4535.9 kg) or more except for:

* * * * *

(B) Flammable liquids with a flashpoint below 100 °F (37.8 °C) stored in atmospheric tanks or transferred that are kept below their normal boiling point without benefit of chilling or refrigeration.

* * * * *

(d) * * *

(1) * * *

(vii) Hazardous effects of inadvertent mixing of different materials that could foreseeably occur.

Note to paragraph (d)(1): Safety data sheets meeting the requirements of § 1910.1200(g) may be used to comply with this requirement to the extent they contain the information required by this paragraph (d)(1).

* * * * *

■ 41. Amend § 1926.65 paragraph (a)(3) by revising the definition of ''Health hazard'' to read as follows:

§ 1926.65 Hazardous waste operations and emergency response.

(a) * * *

(3) * * *

Health hazard means a chemical or a pathogen where acute or chronic health effects may occur in exposed employees. It also includes stress due to temperature extremes. The term *health hazard* includes chemicals that are classified in accordance with the Hazard Communication Standard, § 1910.1200, as posing one of the following hazardous effects: acute toxicity (any route of exposure); skin corrosion or irritation; serious eye damage or eye irritation; respiratory or skin sensitization; germ cell mutagenicity; carcinogenicity; reproductive toxicity; specific target organ toxicity (single or repeated exposure); aspiration toxicity or simple asphyxiant. (*See* Appendix A to § 1910.1200—Health Hazard Criteria (Mandatory) for the criteria for determining whether a chemical is classified as a health hazard.)

* * * * *

Subpart F—[Amended]

■ 42. Revise the authority citation for subpart F to read as follows:

Authority: Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704); Sections 4, 6, and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); Secretary of Labor's Order No. 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736),1–90 (55 FR 9033), 6–96 (62 FR 111), 3–2000 (62 FR 50017), 5–2002 (67 FR 650008), 5–2007 (72 FR 31159), 4–2010 (75 FR 55355), or 1–2012

(77 FR 3912), as applicable; and 29 CFR part 1911.

* * * * *

■ 43. Amend § 1926.152 as follows:
■ A. Revise the section heading;
■ B. Remove the words ''and combustible'' from the first sentence in paragraph (a)(1), the heading of paragraph (b), and paragraphs (b)(2) introductory text, (b)(4)(viii), (h) introductory text, and (h)(1);
■ C. Remove the words ''or combustible'' wherever it appears in paragraphs (a)(2), (b)(1), (b)(4)(iii), (b)(5), and (c)(3);
■ D. Remove the words ''or combustible'' in paragraphs (d) (the heading), (d)(1), (d)(4), (e)(1), (e)(3), (f)(2), (g)(1), and (g)(8);
■ E. Remove the words ''or combustible'' wherever it appears in paragraphs (i)(1)(i)(D) and (F), (i)(1)(iii)(D), (i)(2)(ii)(A), (D), and (F), (i)(2)(vii)(B)(*2*), (i)(4)(iv)(C), (i)(5)(vi)(A), (D), (G), (V) introductory text, and (i)(5)(vi)(V)(*1*); (j)(1)(i), (j)(2)(ii), (j)(5), and (k)(4);
■ F. Amend the fifth sentence of paragraph (b)(4)(vi) by adding the words ''Category 1, 2, or 3'' before the words ''flammable liquids'';
■ G. Amend paragraphs (e)(2), (e)(5), (g)(7)(i), and (g)(7)(ii), by adding the words ''Category 1, 2, or 3'' before the words ''flammable liquids'' ;
■ H. Amend paragraphs (f)(1) and (f)(3) by removing the words ''Flammable liquids'' and adding in their place the words ''Category 1, 2, or 3 flammable liquids'';
■ I. Revise paragraphs (b)(2)(iii), (b)(3), (h) introductory text, (i)(2)(iv)(F) and (G), (i)(2)(vi)(B), (i)(2)(viii)(E), (i)(3)(i), (i)(3)(iv)(A) and (C), (i)(3)(v)(D), and (i)(4)(iv)(E);
■ J. Revise Table F–19 and paragraph (k)(3)(iv).

The revisions read as follows:

§ 1926.152 Flammable liquids.

* * * * *

(b) * * *

(2) * * *

(iii) Cabinets shall be labeled in conspicuous lettering, ''Flammable-Keep Away from Open Flames.''

(3) Not more than 60 gallons of Category 1, 2 and/or 3 flammable liquids or 120 gallons of Category 4 flammable liquids shall be stored in any one storage cabinet. Not more than three such cabinets may be located in a single storage area. Quantities in excess of this shall be stored in an inside storage room.

* * * * *

(h) *Scope.* This section applies to the handling, storage, and use of flammable liquids with a flashpoint at or below 199.4 °F (93 °C). This section does not apply to:

* * * * *

(i) * * *

(2) * * *

(iv) * * *

(F) Tanks and pressure vessels storing Category 1 flammable liquids shall be equipped with venting devices that shall be normally closed except when venting to pressure or vacuum conditions. Tanks and pressure vessels storing Category 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), shall be equipped with venting devices that shall be normally closed except when venting under pressure or vacuum conditions, or with approved flame arresters.

Exemption: Tanks of 3,000 bbls (barrels) (84 m(3)) capacity or less containing crude petroleum in crude-producing areas; and, outside aboveground atmospheric tanks under 1,000 gallons (3,785 L) capacity containing other than Category 1 flammable liquids may have open vents. (*See* paragraph (i)(2)(vi)(B) of this section.)

(G) Flame arresters or venting devices required in paragraph (i)(2)(iv)(F) of this section may be omitted for Category 2 flammable liquids or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C) where conditions are such that their use may, in case of obstruction, result in tank damage.

* * * * *

(vi) * * *

(B) Where vent pipe outlets for tanks storing Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), are adjacent to buildings or public ways, they shall be located so that the vapors are released at a safe point outside of buildings and not less than 12 feet (3.658 m) above the adjacent ground level. In order to aid their dispersion, vapors shall be discharged upward or horizontally away from closely adjacent walls. Vent outlets shall be located so that flammable vapors will not be trapped by eaves or other obstructions and shall be at least 5 feet (1.52 m) from building openings.

(viii) * * *

(E) For Category 2 flammable liquids or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), other than crude oils, gasolines, and asphalts, the fill pipe shall be so designed and installed as to minimize the possibility of generating static electricity. A fill pipe entering the top of a tank shall terminate within 6 inches (15.24 cm) of the bottom of the tank and shall be installed to avoid excessive vibration.

* * * * *

(3) * * *

(i) *Location.* Evacuation for underground storage tanks shall be made with due care to avoid undermining of foundations of existing structures. Underground tanks or tanks under buildings shall be so located with respect to existing building foundations and supports that the loads carried by the latter cannot be transmitted to the tank. The distance from any part of a tank storing Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), to the nearest wall of any basement or pit shall be not less than 1 foot (0.304 m), and to any property line that may be built upon, not less than 3 feet (0.912 m). The distance from any part of a tank storing Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) or Category 4 flammable liquids to the nearest wall of any basement, pit or property line shall be not less than 1 foot (0.304 m).

* * * * *

(iv) * * *

(A) Location and arrangement of vents for Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C). Vent pipes from tanks storing Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), shall be so located that the discharge point is outside of buildings, higher than the fill pipe opening, and not less than 12 feet (3.658 m) above the adjacent ground level. Vent pipes shall discharge only upward in order to disperse vapors. Vent pipes 2 inches (5.08 cm) or less in nominal inside diameter shall not be obstructed by devices that will cause excessive back pressure. Vent pipe outlets shall be so located that flammable vapors will not enter building openings, or be trapped under eaves or other obstructions. If the vent pipe is less than 10 feet (3.04 m) in length, or greater than 2 inches (5.08 cm) in nominal inside diameter, the outlet shall be provided with a vacuum and pressure relief device or there shall be an approved flame arrester located in the vent line at the outlet or within the approved distance from the outlet.

* * * * *

(C) Location and arrangement of vents for Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) or Category 4 flammable liquids. Vent pipes from tanks storing Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) or Category 4

flammable liquids shall terminate outside of the building and higher than the fill pipe opening. Vent outlets shall be above normal snow level. They may be fitted with return bends, coarse screens or other devices to minimize ingress of foreign material.

* * * * *

(v) * * *

(D) For Category 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), other than crude oils, gasolines, and asphalts, the fill pipe shall be so designed and installed as to minimize the possibility of generating static electricity by terminating within 6 inches (15.24 cm) of the bottom of the tank.

* * * * *

(4) * * *

(iv) * * *

(E) For Category 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), other than crude oils, gasolines, and asphalts, the fill pipe shall be so designed and installed as to minimize the possibility of generating static electricity by terminating within 6 inches (15.24 cm) of the bottom of the tank.

* * * * *

(k) * * *

(3) * * *

* * * * *

BILLING CODE 4510–26–P

TABLE F-19 - ELECTRICAL EQUIPMENT HAZARDOUS AREAS - SERVICE STATIONS

Location	Class I Group D division	Extent of classified area
Underground tank:		
Fill opening	1	Any pit, box or space below grade level, any part of which is within the Division 1 or 2 classified area.
	2	Up to 18 inches (45.72 cm) above grade level within a horizontal radius of 10 feet (3.04 m) from a loose fill connection and within a horizontal radius of 5 feet (1.52 m) from a tight fill connection.
Vent - Discharging upward	1	Within 3 feet (0.912 m) of open end of vent, extending in all directions.
	2	Area between 3 feet (0.912 m) and 5 feet (1.52 m) of open end of vent, extending in all directions.
Dispenser:		
Pits	1	Any pit, box or space below grade level, any part of which is within the Division 1 or 2 classified area.
Dispenser enclosure	1	The area 4 feet (1.216 m) vertically above base within the enclosure and 18 inches (45.72 cm) horizontally in all directions.
Outdoor	2	Up to 18 inches (45.72 cm) above grade level within 20 feet (6.08 m) horizontally of any edge of enclosure.
Indoor:		
With mechanical ventilation.	2	Up to 18 inches (45.72 cm) above grade level within 20 feet (6.08 m) horizontally of any edge of enclosure.
With gravity ventilation	2	Up to 18 inches (45.72 cm) above grade or floor level within 25 feet (7.6 m) horizontally of any edge of enclosure.
Remote pump - Outdoor	1	Any pit, box or space below grade level if any part is within a horizontal distance of 10 feet (3.04 m) from any edge of pump.
	2	Within 3 feet (0.912 m) of any edge of pump, extending

		in all directions. Also up to 18 inches (45.72 cm) above grade level within 10 feet (3.04 m) horizontally from any edge of pump.
Remote pump - Indoor.....	1	Entire area within any pit.
	2	Within 5 feet (1.52 m) of any edge of pump, extending in all directions. Also up to 3 feet (3.04 m) above floor or grade level within 25 feet (6.08 m) horizontally from any edge of pump.
Lubrication or service room.	1	Entire area within any pit.
	2	Area up to 18 inches (45.72 cm) above floor or grade level within entire lubrication room.
Dispenser for Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 ° F (37.8 ° C)	2	Within 3 feet (0.912 m) of any fill or dispensing point, extending in all directions.
Special enclosure inside building per 1910.106(f)(1)(ii).	1	Entire enclosure.
Sales, storage and rest rooms.....	(1)	If there is any opening to these rooms within the extent of a Division 1 area, the entire room shall be classified as Division 1.

(1) Ordinary.

* * * * *

BILLING CODE 4510–26–C

(iv) Piping handling Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), shall be grounded to control stray currents.

* * * * *

■ 44. Amend § 1926.155 as follows:

■ A. Remove and reserve paragraph (c);

■ B. Revise paragraphs (h) and (i)(1) and (2).

The revisions read as follows:

§ 1926.155 Definitions applicable to this subpart.

* * * * *

(h) *Flammable liquid* means any liquid having a vapor pressure not exceeding 40 pounds per square inch (absolute) at 100 °F (37.8 °C) and having a flashpoint at or below 199.4 °F (93 °C). Flammable liquids are divided into four categories as follows:

(1) Category 1 shall include liquids having flashpoints below 73.4 °F (23 °C) and having a boiling point at or below 95 °F (35 °C).

(2) Category 2 shall include liquids having flashpoints below 73.4 °F (23 °C) and having a boiling point above 95 °F (35 °C).

(3) Category 3 shall include liquids having flashpoints at or above 73.4 °F (23 °C) and at or below 140 °F (60 °C).

(4) Category 4 shall include liquids having flashpoints above 140 °F (60 °C) and at or below 199.4 °F (93 °C).

(i) * * *

(1) The flashpoint of liquids having a viscosity less than 45 Saybolt Universal Second(s) at 100 °F (37.8 °C) and a flashpoint below 175 °F (79.4 °C) shall be determined in accordance with the Standard Method of Test for Flash Point by the Tag Closed Tester, ASTM D–56–69 (incorporated by reference; *See* § 1926.6), or an equivalent method as defined by § 1910.1200 appendix B.

(2) The flashpoints of liquids having a viscosity of 45 Saybolt Universal Second(s) or more at 175 °F (79.4 °C) or higher shall be determined in accordance with the Standard Method of Test for Flash Point by the Pensky Martens Closed Tester, ASTM D–93–69 (incorporated by reference; *See* § 1926.6), or an equivalent method as defined by § 1910.1200 appendix B.

* * * * *

Subpart Z—[Amended]

■ 45. Revise the authority citation for subpart Z to read as follows:

Authority: Section107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704); Sections 4, 6, and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); and Secretary of Labor's Order No. 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736), 1–90 (55 FR 9033), 6–96 (62 FR 111), 3–2000 (65 FR 50017), 5–2002 (67 FR 65008), 5–2007 (72 FR 31159), 4–2010 (75 FR 55355), or 1–2012 (77 FR 3912) as applicable; and 29 CFR part 1911.

Section 1926.1102 not issued under 29 U.S.C. 655 or 29 CFR part 1911; also issued under 5 U.S.C. 553.

■ 46. Amend § 1926.1101 as follows:
■ A. Redesignate paragraph (k)(1) as (k)(1)(i) and add a new heading to paragraph (k)(1);
■ B. Add new paragraphs (k)(1)(ii), (k)(7)(ii)(C), (k)(7)(ii)(D), and (k)(8)(iv);
■ C. Amend paragraphs (k)(2)(i) and (k)(3)(i) by removing the references to ''(k)(1)'' and adding in their place ''(k)(1)(i)'';
■ D. Revise paragraphs (k)(7)(ii)(A) and (B), and (k)(8)(ii) and (iii);

The revisions read as follows:

§ 1926.1101 Asbestos.

* * * * *

(k) * * *

(1) *Hazard communication.*

* * * * *

(ii) The employer shall include asbestos in the program established to comply with the Hazard Communication Standard (HCS) (§ 1910.1200). The employer shall ensure that each employee has access to labels on containers of asbestos and safety data sheets, and is trained in accordance with the provisions of HCS and paragraphs (k)(9) and (10) of this section. The employer shall provide information on at least the following hazards: Cancer and lung effects.

* * * * *

(7) * * *

(ii) * * *

(A) The warning signs required by paragraph (k)(7) of this section shall bear the following information.

DANGER
ASBESTOS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
AUTHORIZED PERSONNEL ONLY

(B) In addition, where the use of respirators and protective clothing is required in the regulated area under this section, the warning signs shall include the following:

WEAR RESPIRATORY PROTECTION AND PROTECTIVE CLOTHING IN THIS AREA

(C) Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (k)(7)(ii)(A) of this section:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY

(D) Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (k)(7)(ii)(B) of this section:

RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA

* * * * *

(8) * * *

(ii) The employer shall ensure that such labels comply with paragraphs (k) of this section.

(iii) The employer shall ensure that labels of bags or containers of protective clothing and equipment, scrap, waste, and debris containing asbestos fibers bear the following information:

DANGER
CONTAINS ASBESTOS FIBERS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
DO NOT BREATHE DUST
AVOID CREATING DUST

(iv) (A) Prior to June 1, 2015, employers may include the following information on raw materials, mixtures or labels of bags or containers of protective clothing and equipment, scrap, waste, and debris containing asbestos fibers in lieu of the labeling requirements in paragraphs (k)(8)(ii) and (k)(8)(iii) of this section:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

(B) Labels shall also contain a warning statement against breathing asbestos fibers.

* * * * *

■ 47. Revise § 1926.1126 paragraphs (g)(2)(iv) and (j)(1) to read as follows:

§ 1926.1126 Chromium (VI).

* * * * *

(g) * * *

(2) * * *

(iv) The employer shall ensure that bags or containers of contaminated protective clothing or equipment that are removed from change rooms for laundering, cleaning, maintenance, or disposal shall be labeled in accordance with the requirements of the Hazard Communication Standard, § 1910.1200.

* * * * *

(j) * * *

(1) *Hazard communication.* The employer shall include chromium (VI) in the program established to comply with the Hazard Communication Standard (HCS) (§ 1910.1200). The employer shall ensure that each employee has access to labels on containers of chromium and safety data sheets, and is trained in accordance with the provisions of § 1910.1200 and paragraph (j)(2) of this section. The employer shall provide information on at least the following hazards: Cancer; eye irritation; and skin sensitization.

* * * * *

■ 48. Revise § 1926.1127 paragraphs (i)(2)(iv), (k)(7), and (m)(1), (m)(2), and (m)(3), to read as follows:

§ 1926.1127 Cadmium.

* * * * *

(i) * * *

(2) * * *

(iv) The employer shall ensure that containers of contaminated protective clothing and equipment that are to be taken out of the change rooms or the workplace for laundering, cleaning, maintenance or disposal shall bear labels in accordance with paragraph (m)(3)(ii) of this section.

(k) * * *

(7) Waste, scrap, debris, bags, and containers, personal protective equipment and clothing contaminated with cadmium and consigned for disposal shall be collected and disposed of in sealed impermeable bags or other closed, impermeable containers. These bags and containers shall be labeled in accordance with paragraph (m)(3)(ii) of this section.

* * * * *

(m) * * *

(1) *Hazard communication.* The employer shall include cadmium in the program established to comply with the Hazard Communication Standard (HCS) (§ 1910.1200). The employer shall ensure that each employee has access to labels on containers of cadmium and safety data sheets, and is trained in accordance with the provisions of HCS and paragraph (m)(4) of this section. The employer shall provide information on at least the following hazards: Cancer; lung effects; kidney effects; and acute toxicity effects.

(2) *Warning signs.* (i) Warning signs shall be provided and displayed in regulated areas. In addition, warning signs shall be posted at all approaches to regulated areas so that an employee may read the signs and take necessary protective steps before entering the area.

(ii) Warning signs required by paragraph (m)(2)(i) of this section shall bear the following legend:

DANGER
CADMIUM
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS AND KIDNEYS
WEAR RESPIRATORY PROTECTION IN THIS AREA
AUTHORIZED PERSONNEL ONLY

(iii) The employer shall ensure that signs required by this paragraph (m)(2) are illuminated, cleaned, and maintained as necessary so that the legend is readily visible.

(iv) Prior to June 1, 2016, employers may use the following legend in lieu of

that specified in paragraph (m)(2)(ii) of this section:

DANGER
CADMIUM
CANCER HAZARD
CAN CAUSE LUNG AND KIDNEY DISEASE
AUTHORIZED PERSONNEL ONLY
RESPIRATORS REQUIRED IN THIS AREA

(3) *Warning labels.* (i) Shipping and storage containers containing cadmium or cadmium compounds shall bear appropriate warning labels, as specified in paragraph (m)(1) of this section.

(ii) The warning labels for containers of cadmium-contaminated protective clothing, equipment, waste, scrap, or debris shall include at least the following information:

DANGER
CONTAINS CADMIUM
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS AND KIDNEYS
AVOID CREATING DUST

(iii) Where feasible, installed cadmium products shall have a visible label or other indication that cadmium is present.

(iv) Prior to June 1, 2015, employers may include the following information on shipping and storage containers containing cadmium, cadmium compounds, or cadmium-contaminated clothing, equipment, waste, scrap, or debris in lieu of the labeling requirements specified in paragraphs (m)(3)(i) and (m)(3)(ii) of this section:

DANGER
CONTAINS CADMIUM
CANCER HAZARD
AVOID CREATING DUST
CAN CAUSE LUNG AND KIDNEY DISEASE

* * * * *

[FR Doc. 2012–4826 Filed 3–20–12; 11:15 am]

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Part III

Environmental Protection Agency

40 CFR Part 65

National Uniform Emission Standards for Storage Vessel and Transfer Operations, Equipment Leaks, and Closed Vent Systems and Control Devices; and Revisions to the National Uniform Emission Standards General Provisions; Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 65

[EPA–HQ–OAR–2010–0868; EPA–HQ–OAR–2010–0869; EPA–HQ–OAR–2010–0870; EPA–HQ–OAR–2010–0871; FRL–9645–1]

RIN 2060–AR00

National Uniform Emission Standards for Storage Vessel and Transfer Operations, Equipment Leaks, and Closed Vent Systems and Control Devices; and Revisions to the National Uniform Emission Standards General Provisions

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The EPA is proposing National Uniform Emission Standards for Storage Vessels and Transfer Operations, Equipment Leaks and Control Devices, herein referred to as Uniform Standards. The EPA is also proposing supplemental revisions to the National Uniform Emission Standards General Provisions, which were proposed with the National Uniform Emission Standards for Heat Exchange Systems, signed by the EPA Administrator on November 30, 2011.

The proposed Uniform Standards would be referenced, as appropriate, in future revisions to new source performance standards and national emission standards for hazardous air pollutants for individual source categories that are part of the chemical manufacturing and refining industries that have storage vessels and transfer operations, equipment leaks or control devices used to control process vents from reactors, distillation and other operations, as well as from emissions from storage vessels, transfer operations and equipment leaks that are routed to control devices. Establishing these Uniform Standards is consistent with the objectives of Executive Order 13563, *Improving Regulation and Regulatory Review,* issued on January 18, 2011. In the future, as we periodically review and, if necessary, revise new source performance standards and national emission standards for hazardous air pollutants, as required by the Clean Air Act, we can direct those rulemakings to the proposed Uniform Standards, provided the Uniform Standards meet the applicable statutory stringency requirements for the specific rulemaking. The proposed Uniform Standards would ensure consistency and streamline recordkeeping and reporting requirements for facilities with storage vessels and transfer operations, equipment leaks and process vents that must comply with multiple regulations.

DATES: *Comments.* Comments must be received on or before June 25, 2012.

Public Hearing. If anyone contacts the EPA by April 10, 2012 requesting to speak at a public hearing, the EPA will hold a public hearing on or about April 25, 2012.

ADDRESSES: *Comments.* Technical comments pertinent to the Uniform Standards should be identified as follows:

- Uniform Standards for Storage Vessels and Transfer Operations should be marked, ''Attention Docket ID No. EPA–HQ–OAR–2010–0871.''
- Uniform Standards for Equipment Leaks should be marked, ''Attention Docket ID No. EPA–HQ–OAR–2010–0869.''
- Uniform Standards for Control Devices should be marked, ''Attention Docket ID No. EPA–HQ–OAR–2010–0868.''
- Uniform Standards General Provisions or General Comments on the Uniform Standards should be marked, ''Attention Docket ID No. EPA–HQ–OAR–2010–0870.''

Submit your comments, identified by the appropriate Docket ID No., by one of the following methods:

- *http://www.regulations.gov.* Follow the on-line instructions for submitting comments.
- *http://www.epa.gov/oar/docket.html.* Follow the instructions for submitting comments on the EPA Air and Radiation Docket Web site.
- *Email:* Comments may be sent by electronic mail (email) to *a-and-r-docket@epa.gov,* Attention Docket ID No. EPA–HQ–OAR–2010–0868; EPA–HQ–OAR–2010–0869; EPA–HQ–OAR–2010–0870; or EPA–HQ–OAR–2010–0871 (as appropriate).
- *Fax:* Fax your comments to: (202) 566–9744, Docket ID No. EPA–HQ–OAR–2010–0868; EPA–HQ–OAR–2010–0869; EPA–HQ–OAR–2010–0870; or EPA–HQ–OAR–2010–0871 (as appropriate).
- *Mail:* Send your comments to: EPA Docket Center (EPA/DC), Environmental Protection Agency, Mailcode 2822T, 1200 Pennsylvania Ave. NW., Washington, DC 20460, Attention Docket ID No. EPA–HQ–OAR–2010–0868; EPA–HQ–OAR–2010–0869; EPA–HQ–OAR–2010–0870; or EPA–HQ–OAR–2010–0871 (as appropriate). Please include a total of two copies. We request that a separate copy also be sent to the contact person identified below (see **FOR FURTHER INFORMATION CONTACT**). In addition, please mail a copy of your comments on the information collection provisions to the Office of Information and Regulatory Affairs, OMB, Attention: Desk Officer for EPA, 725 17th St. NW., Washington, DC 20503.
- *Hand Delivery:* Deliver your comments to: EPA Docket Center (EPA/DC), EPA West Building, Room 3334, 1301 Constitution Ave. NW., Washington, DC 20460, Attention Docket ID No. EPA–HQ–OAR–2010–0868; EPA–HQ–OAR–2010–0869; EPA–HQ–OAR–2010–0870; or EPA–HQ–OAR–2010–0871 (as appropriate). Such deliveries are only accepted during the normal hours of operation (8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays), and special arrangements should be made for deliveries of boxed information.

Instructions: All submissions must include agency name and docket number for this rulemaking. Direct your comments to Docket ID No. EPA–HQ–OAR–2010–0868; EPA–HQ–OAR–2010–0869; EPA–HQ–OAR–2010–0870; or EPA–HQ–OAR–2010–0871 (as appropriate). The EPA's policy is that all comments received will be included in the public docket and may be made available online at *http://www.regulations.gov,* including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through *http://www.regulations.gov* or email. The *http://www.regulations.gov* Web site is an ''anonymous access'' system, which means the EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to the EPA without going through *http://www.regulations.gov,* your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, the EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If the EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, the EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption and be free of any defects or viruses.

Docket: All documents in the docket are listed in the *http://www.regulations.gov* index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy form. Publicly available docket materials are available either electronically at *http://www.regulations.gov* or in hard copy at the EPA Docket Center, EPA/DC, EPA West Building, Room 3334, 1301 Constitution Ave. NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the EPA Docket Center is (202) 566–1742.

FOR FURTHER INFORMATION CONTACT: For information regarding the proposed General Provisions to the National Uniform Emission Standards, contact Brenda Shine, (919) 541–3608, Sector Policies and Programs Division (E143–01), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; Telephone number: (919) 541–3608; Fax number (919) 541–0246; email address: *shine.brenda@epa.gov.*

For information regarding the proposed National Uniform Emission Standards for Equipment Leaks, contact Jodi Howard, Sector Policies and Programs Division (E143–01), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; Telephone number: (919) 541–4607; Fax number (919) 541–0246; email address: *howard.jodi@epa.gov.*

For information regarding the proposed National Uniform Emission Standards for Storage Vessel and Transfer Operations, contact Nick Parsons, Sector Policies and Programs Division (E143–01), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; Telephone number: (919) 541–5372; Fax number (919) 541–0246; email address: *parsons.nick@epa.gov.*

For information regarding the proposed National Uniform Emission Standards For Control Devices, contact Andrew Bouchard, Sector Policies and Programs Division (E143–01), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; Telephone number: (919) 541–4036; Fax number (919) 541–0246; email address: *bouchard.andrew@epa.gov.*

SUPPLEMENTARY INFORMATION: *Acronyms and Abbreviations.* The following acronyms and abbreviations are used in this document.

AMOS ample margin of safety
ANSI American National Standards Institute
ASME American Society of Mechanical Engineers
ASTM American Society of Testing and Materials
API American Petroleum Institute
AWP Alternative Work Practice
BSER best system of emission reduction
CAA Clean Air Act
CAM compliance assurance monitoring
CAR Consolidated Federal Air Rule
CBI Confidential Business Information
CDX Central Data Exchange
CEDRI Compliance and Emissions Data Reporting Interface
CEMS continuous emission monitoring system
CFR Code of Federal Regulations
CMS continuous monitoring system
CPMS continuous parameter monitoring system
DOT U.S. Department of Transportation
EFR external floating roof
EIIP Emissions Inventory Improvement Program
EPA U.S. Environmental Protection Agency
ERT Electronic Reporting Tool
GACT generally available control technology or management practice
gal/yr gallons per year
HAP hazardous air pollutants
HON Hazardous Organic NESHAP
HRVOC highly-reactive volatile organic compound
hr/yr hours per year
ICR information collection request
IFR internal floating roof
in. wc inch water column
kPa kilopascals
LDAR leak detection and repair
MACT maximum achievable control technology
mg/acm milligram per actual cubic meter
MON Miscellaneous Organic Chemical Manufacturing NESHAP
MTVP maximum true vapor pressure
MW megawatts
NAICS North American Industry Classification System
NESHAP National Emission Standards For Hazardous Air Pollutants
NPDES National Pollution Discharge Elimination System
NSPS New Source Performance Standards
NTTAA National Technology Transfer and Advancement Act
OLD organic liquids distribution
PID photo ionization detector
PM particulate matter
$PM_{2.5}$ fine particulate matter
ppm parts per million
ppmv parts per million by volume
PRD pressure relief device
psia pounds per square inch absolute
psig pounds per square inch gauge
PVC polyvinyl chloride and copolymers
QA/QC quality assurance/quality control
QA quality assurance
QIP quality improvement program
SOCMI synthetic organic chemical manufacturing industry
SR stoichiometric air ratio
SSM startup, shutdown and malfunction
STERPP Storage Tank Emission Reduction Partnership Program
TAC total annual costs
TCI Total capital costs
tpy tons per year
TTN Technology Transfer Network
UMRA Unfunded Mandates Reform Act
U.S. United States
VCS voluntary consensus standards
VOC volatile organic compound
WWW World Wide Web

Organization of This Document. The following outline is provided to aid in locating information in this preamble.

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B. What should I consider as I prepare my comments to the EPA?
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I. National Technology Transfer and Advancement Act
J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

I. General Information

A. Does the proposed action apply to me?

Regulated Entities. The proposed rules would establish a series of national uniform emission standards for storage vessels and transfer operations, equipment leaks and control devices.

We expect, in future rulemaking actions, to propose that new source performance standards (NSPS) and national emission standards for hazardous air pollutants (NESHAP) for other source categories will also reference and require compliance with Uniform Standards, as appropriate, provided that the referencing subpart rulemakings demonstrate that the Uniform Standards meet the statutory stringency requirements that would apply to the referencing subpart source category, such as Clean Air Act (CAA) section 112(d), maximum achievable control technology (MACT), section 112(f), residual risk ample margin of safety (AMOS) and section 111(b), best systems of emission reduction (BSER). Examples of categories and entities potentially affected by the proposed Uniform Standards for Storage Vessels and Transfer Operations, Equipment Leaks and Control Devices include the following:

Category	NAICS [a] code	Examples of potentially regulated entities
Chemical Manufacturing	325	Manufacturing industries, particularly petrochemical, chemical, polymers, plastics and specialty chemicals manufacturing.
Refining	324	Petroleum refineries.

[a] North American Industry Classification System.

This table is not intended to be exhaustive; rather, it provides a guide for readers regarding entities the EPA anticipates are likely to be potentially affected by this action through future, separate rulemaking actions.

The table includes source categories currently subject to NESHAP under subparts in 40 CFR part 61 and 40 CFR part 63 and NSPS under subparts in 40 CFR part 60. The entities listed in the above table are not affected by this action unless and until the EPA proposes in a separate notice to apply a Uniform Standard to their source categories. As proposed in 40 CFR part 65, subparts H, I, J and M would apply to owners or operators expressly referenced to part 65 from future rulemakings that may result in new subparts or revisions to current subparts of 40 CFR parts 60, 61 or 63. The list of categories and entities potentially affected by this proposed action in the future is provided solely to inform owners and operators of facilities in those categories of the potential for future rulemaking and to solicit comments from these entities at this time. If, in future rulemakings, the EPA were to propose to apply these Uniform Standards to a particular source category, there would be another opportunity to comment on the application to a specific industry. Because the EPA believes that establishing Uniform Standards for types of emission points found in a variety of industries will be efficient for facilities, state, local and tribal governments and the public, we seek broad input at this time. In the future, you would determine whether your facility, company, business or organization would be regulated by a proposed action by examining the applicability criteria in the referencing subpart. If you have any questions regarding the applicability of this action to a particular entity, consult either the air permitting authority for the entity or your EPA regional representative, as listed in the referencing subpart.

B. What should I consider as I prepare my comments to the EPA?

1. Submitting CBI

Do not submit information that you consider to be CBI electronically through *http://www.regulations.gov* or email. Send or deliver information identified as CBI to only the following address: U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, U.S. EPA Mailroom (C404–02), Attention: Mr. Roberto Morales, Document Control Officer, 109 T.W. Alexander Drive, Research Triangle Park, NC 27711, Attention Docket ID No. EPA–HQ–OAR–2010–0868; EPA–HQ–OAR–2010–0869; EPA–HQ–OAR–2010–0870; or EPA–HQ–OAR–2010–0871 (as appropriate).

Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD–ROM that you mail to the EPA, mark the outside of the disk or CD–ROM as CBI and then identify electronically within the disk or CD–ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

If you have any questions about CBI or the procedures for claiming CBI, please consult the appropriate person identified in the **FOR FURTHER INFORMATION CONTACT** section.

2. Docket

The docket numbers for the proposed action regarding the Uniform Standards are as follows:

- Uniform Standards for Storage Vessels and Transfer Operations (40 CFR part 65, subpart I) is Docket ID No. EPA–HQ–OAR–2010–0871.
- Uniform Standards for Equipment Leaks (40 CFR part 65, subpart J) is Docket ID No. EPA–HQ–OAR–2010–0869.
- Uniform Standards for Control Devices (40 CFR part 65, subpart M) is Docket ID No. EPA–HQ–OAR–2010–0868.
- Uniform Standards General Provisions or general comments on the Uniform Standards (40 CFR part 65,

subpart H) is Docket ID No. EPA–HQ–OAR–2010–0870.

To ensure proper receipt by the EPA, be sure to identify the docket ID number(s) assigned to this action in the subject line on the first page of your response.

C. Where can I get a copy of this document?

In addition to being available in the docket, an electronic copy of this proposed action will also be available on the World Wide Web (WWW) through the Technology Transfer Network (TTN). Following signature, a copy of the proposed action will be posted on the TTN's policy and guidance page for newly proposed or promulgated rules at the following address: *http://www.epa.gov/ttn/oarpg/*. The TTN provides information and technology exchange in various areas of air pollution control.

D. Public Hearing

If a public hearing is held, it will be held at 10 a.m. at the EPA's Environmental Research Center Auditorium, Research Triangle Park, NC, or an alternate site nearby. Contact Ms. Janet Eck at (919) 541–7946 to request a hearing, to request to speak at a public hearing, to determine if a hearing will be held or to determine the hearing location. If no one contacts the EPA requesting to speak at a public hearing concerning this proposed rule by April 10, 2012, a hearing will not be held.

II. Background Information for These Proposed Rules

A. What is the statutory authority and regulatory background for the proposed Uniform Standards?

Consistent with the authority under CAA section 301(a)(1) and CAA sections 111 and 112, we are proposing to establish the Uniform Standards as a set of foundational requirements that may be considered and adopted by future rulemakings under CAA sections 111 and 112. Section 301(a)(1) of the CAA authorizes the Administrator ''to prescribe such regulations as are necessary to carry out his functions under [the CAA].'' The proposed Uniform Standards, if finalized, would provide a set of common control requirement subparts describing testing, monitoring, recordkeeping and reporting requirements that would, if appropriate, be referenced in future CAA 111 and 112 rulemakings. Future rulemakings would include CAA section 112(d) standards, based on MACT determinations and generally available control technology or management practice (GACT) determinations (for area sources), as well as CAA section 112(d)(6) reviews of existing standards and CAA section 112(f) revisions, which take into account the risk to public health remaining after application of the MACT-based standards. The proposed Uniform Standards could also be referenced during CAA section 111(b) rulemakings to establish NSPS for source categories, and as we periodically review and revise these standards, to reflect improvements in methods for reducing emissions. CAA section 111(b) standards require a level of control that historically has been referred to as ''Best Demonstrated Technology.'' In order to better reflect that CAA section 111 was amended in 1990 to clarify that ''best systems'' may or may not be ''technology,'' the EPA is now using the term ''best system of emission reduction'' or BSER.

As foundational requirements, the Uniform Standards would become applicable to a particular source category only if a subsequent rulemaking for that source category references the Uniform Standards. We have previously promulgated similar standards, such as the 40 CFR parts 60, 61 and 63 General Provisions (59 FR 12430, March 16, 1994) and the Consolidated Federal Air Rules (CAR) (65 FR 78267, December 14, 2000), which only become applicable to a source category when referenced by another rulemaking. In this preamble, we refer to subparts that would reference the Uniform Standards as ''referencing subparts.'' The authority for the referencing standards would be provided under the referencing subpart. The rationale for each determination that the Uniform Standards in proposed 40 CFR part 65, subparts H, I, J or M are equivalent to MACT, GACT, AMOS or BSER and comply with all other applicable statutory requirements would be presented in the rulemaking for the individual source category with an opportunity for public comment at that time.

The proposed Uniform Standards are also responsive to Executive Order 13563, *Improving Regulation and Regulatory Review,* which directs each federal agency to ''periodically review its existing significant regulations to determine whether any such regulations should be modified, streamlined, expanded, or repealed so as to make the agency's regulatory program more effective or less burdensome in achieving the regulatory objectives.'' The proposed Uniform Standards reflect the EPA's regulatory experience from previous NESHAP and NSPS rulemakings involving similar kinds of sources and emission points. They incorporate our review of the most current technology and emission reduction practices, as detailed in sections III through V of the preamble, and provide updated monitoring, recordkeeping and reporting requirements that may be referenced by future CAA 111 and 112 rulemakings.

The proposed Uniform Standards for Storage Tanks and Transfer Operations, Equipment Leaks and Control Devices would be codified under 40 CFR part 65 as subparts I, J and M. The General Provisions for the Uniform Standards and Uniform Standards for Heat Exchange Systems were previously proposed in a separate notice signed by the EPA Administrator on November 30, 2011 (77 FR 960, January 6, 2012) and would be codified under 40 CFR part 65 as subparts H and L, respectively. We are proposing supplemental requirements for the General Provisions (subpart H) to include new provisions applicable to all Uniform Standards, as well as new provisions applicable to individual Uniform Standards in subparts I, J and M. As discussed in section VI.A of this preamble, we are maintaining the previously proposed five sections of subpart H and adding eleven new sections. Of the five previously proposed sections, we are proposing to make substantive changes to three sections. The EPA will consider all comments pertaining to the Uniform Standards General Provisions (subpart H) that were submitted in response to the previous proposal (77 FR 960, January 6, 2012), and will address those comments as we address the comments on the supplemental provisions proposed in this action.

B. What is the history and background of the proposed Uniform Standards?

In a number of cases, the EPA has established CAA standards for different source categories that regulate the same kinds of emission points. Standards for a given type of emission point may require application of controls with similar control efficiencies and include similar design, component or operating standards, even though these emission points may be located at different types of sources or facilities. To avoid duplicative or disjointed requirements, and to promote consistency among technical requirements for similar emission points in different source categories, the EPA has established several common control requirement subparts describing testing, monitoring, recordkeeping and reporting requirements for certain emission points

and emission controls that can be referenced from multiple source categories. For instance, we promulgated standard requirements for selected emission points (*i.e.,* containers, surface impoundments, oil-water separators and organic-water separators, tanks, and individual drain systems) in individual subparts under the NESHAP for Off-Site Waste and Recovery Operations (61 FR 34158, July 1, 1996), and we promulgated subparts for selected emission points (*i.e.,* closed vent systems, control devices, recovery devices and routing to a fuel gas system or a process; equipment leaks; and storage vessels) as part of the Generic MACT program. The Generic MACT standards, which were promulgated under 40 CFR part 63, subparts SS, TT, UU and WW, were referenced in NESHAP requirements for individual source categories.

Consolidation of compliance requirements under these subparts allows for ease of reference, administrative convenience and consistency in the technical requirements of the air emission control requirements applied to similar emission points under different source category regulations. The 40 CFR part 63, subparts SS, TT, UU and WW are emission point- and emissions control-specific. They specify monitoring, recordkeeping and reporting requirements, but generally do not specify emissions reduction performance requirements or applicability thresholds. Instead, the referencing subpart specifies the emissions reduction performance requirements and applicability thresholds.

By establishing these emission point- and emissions control-specific subparts, other source category-specific regulations were able to reference a common set of design, operating, testing, inspection, monitoring, repair, recordkeeping and reporting requirements for air emissions controls. This reduced the potential for duplicative or conflicting technical requirements, and promoted consistency of the air emission requirements applied to similar emission points, while allowing specific emission standards to be set within the context of the source category-specific regulations. Additionally, creating emission point-specific and emissions control-specific subparts ensured that all regulations that cross-referenced these subparts could be amended in a consistent and timely manner, through one regulatory action.

We intend to establish, through the proposed Uniform Standards, a workable process for consolidation and a more efficient approach to rulemaking. The Uniform Standards have, in general, been modeled after the emission-point and emissions control-specific subparts of the Generic MACT. We are proposing the Uniform Standards in lieu of revising the Generic MACT because it is our intention to provide a set of common compliance monitoring, recordkeeping and reporting requirements that could be applied to emission points referenced from CAA 111 and 112 (NSPS and NESHAP, respectively) rulemakings. The Uniform Standards are designed to apply to chemical and refining facilities regulated under the authority of sections 111 and 112 of the CAA and who may currently be subject to regulation under 40 CFR parts 60, 61 and 63. The Generic MACT is currently referenced by NESHAP under the provisions of 40 CFR part 63 and section 112 of the CAA; revising the current Generic MACT to be referenced by sources regulated under NSPS could create confusion regarding regulatory authority. In addition, the Generic MACT currently affects a large number of source categories and referencing subparts; therefore, a large revision of the Generic MACT could potentially be more confusing for regulated sources. Thus, we are proposing to establish the Uniform Standards under 40 CFR part 65 and anticipate, through future notice-and-comment rulemaking, to cross-reference subparts I, J and M from source category emission standards within at least two different parts of title 40 of the CFR—parts 60 and 63, which establish NSPS and NESHAP standards, respectively. The process of revising individual referencing subparts to reference the Uniform Standards or develop new subparts that reference the Uniform Standards is a clear-cut process that allows for review of the needs of specific source categories.

C. What is the relationship between the Uniform Standards and the referencing subparts?

This action may affect other source categories with similar emission points if the EPA takes action in the future to propose to apply the Uniform Standards to one or more other source categories for storage vessels and transfer operations, equipment leaks or process vents. However, the EPA will determine applicability of these proposed Uniform Standards for another source category through notice-and-comment rulemaking. In such a rulemaking, we will explain that all or a portion of 40 CFR part 65, subparts H, I, J or M are consistent with the CAA requirements at issue for the specific authority in the rulemaking. For example, in the context of an NSPS rulemaking, we could determine that subpart J is BSER for the source category at issue or, alternatively, we could determine that different emission standards should apply, but that recordkeeping, reporting and other requirements of subpart J are appropriate.

We expect to see similar benefits for these Uniform Standards as we have seen for previous emission point- and emissions control-specific subparts, as described above, including the ability to reference a common set of standards for the same type of emission point located at sources within different source categories. This approach will maximize consistency between source categories for each type of emission point.

As with the common control requirement subparts previously promulgated, the proposed Uniform Standards would include technical requirements and would not, in most cases, specify source category-specific applicability thresholds or emissions reduction performance requirements, because these requirements are more properly established in source category-specific rules.

However, we are proposing applicability thresholds, compliance requirements and monitoring frequencies that would apply if the referencing subpart does not specify these parameters. In the rulemaking actions that revise or propose standards to cross-reference 40 CFR part 65, subparts I, J and M, we would address whether the referencing subpart should cross-reference subparts I, J and M in their entirety or cross-reference only a subset of subparts I, J and M. Moreover, we would determine whether the referencing (source category-specific) subpart should include more or less stringent requirements than subparts I, J and M.

As we revise or promulgate source category-specific standards that have emission points addressed by a uniform standard for storage vessels, transfer operations, equipment leaks and/or control devices, we would propose whether and to what extent we would reference the Uniform Standards in the proposed 40 CFR part 65, subparts I, J and M. In making that decision, we would consider the applicable CAA requirements, analyses of the individual source category and the similarity of emission characteristics and applicable controls. We would consider factors such as: (1) The volume and concentration of emissions; (2) the type of emissions; (3) the similarity of emission points; (4) the cost and

effectiveness of controls for one source category relative to the cost and effectiveness of controls for the other source category; (5) whether a source has unusual characteristics that might require different analytical methods; and (6) whether any of the sources have existing emission controls that are dissimilar and more stringent than controls required for similar sources outside the source category. These factors would be considered on a source category-specific basis to ensure that sources are appropriately similar, and that emissions control technologies and reductions demonstrated outside of a source category are achievable for new and existing sources in an applicable source category.

In future rulemakings, the referencing subpart would establish the source category-specific requirements, including the regulated materials, appropriate applicability thresholds or tiers, emissions limit requirements (including the format and units of measure) and other source category-specific requirements. Additionally, the referencing subpart would provide rationale for the use of surrogates, if the use of surrogates is appropriate for the source category; for example, the referencing subpart could establish limits on particulate matter (PM) to achieve control of non-volatile metallic hazardous air pollutants (HAP), yet refer to the Uniform Standards for monitoring, recordkeeping and reporting requirements. For any provisions of the Uniform Standards not cross-referenced by a source category-specific subpart, the requirement would be expressly addressed in the source category-specific (referencing) subpart. A portion of 40 CFR part 65, subparts I, J and/or M could be cross-referenced and exceptions could be made within the referencing subpart, as necessary, to ensure that the proposed requirements are appropriate to the source category in light of the applicable CAA requirements. For example, the referencing subpart could specify a monitoring frequency other than that contained in the Uniform Standards if we determine that a different monitoring frequency is appropriate for the regulated emission point in that source category. A referencing subpart with applicability thresholds, for instance, may only direct to a portion of the Uniform Standards or not direct to the Uniform Standards at all for certain thresholds. Because the proposed Uniform Standards could be referenced in this manner, we believe that the requirements in subparts I, J and M would not inhibit the flexibility to address source category-specific needs.

The rationale for each determination that the provisions of 40 CFR part 65, subparts H, I, J or M should be cross-referenced for an individual referencing subpart in light of the applicable CAA requirements, would be addressed in the rulemaking for the individual subpart at the time of proposal, and we would provide an opportunity for public comment at that time. A description of the analyses performed as part of that review would be presented in the rulemaking for the individual subpart and an opportunity for comment would be provided. We would also assess the costs, emission reduction, economic and other impacts as they relate to the specific source category at issue at that time.

In light of these considerations, we have determined that the proposed Uniform Standards would promote the EPA's ability to simplify, clarify and improve implementation of the rules with which source owners or operators must comply, consistent with the objectives of Executive Order 13563, *Improving Regulation and Regulatory Review,* and resulting in a cost and burden reduction for both the public and private sector.

D. What are the purpose and benefits of the proposed Uniform Standards?

This action proposes the Uniform Standards for Storage Vessels and Transfer Operations (40 CFR part 65, subpart I), Equipment Leaks (40 CFR part 65, subpart J) and Control Devices (40 CFR part 65, subpart M), and revisions to the General Provisions for the Uniform Standards (40 CFR part 65, subpart H).

This action is based on the EPA's review of the current requirements for equipment leaks, storage tanks and transfer operations and control devices used to control process vents in light of over 20 years of regulatory implementation experience. The benefits of the proposed Uniform Standards include:

- Providing one-stop requirements for equipment leaks, storage tanks and control devices for the chemical manufacturing and refining industries;
- Providing strengthened control and monitoring requirements based on cost-effective advances in technology that could be considered for adoption in future rulemakings;
- Enhancing compliance and enforcement to ensure that the standards achieve the intended emissions reductions required for MACT, GACT or BSER; and
- Reduction of unnecessary and unproductive regulatory burden.

These benefits also support the objectives of Executive Order 13563, *Improving Regulation and Regulatory Review.* Examples of the changes we are proposing that accomplish each of these objectives are below.

The proposed Uniform Standards provide the benefit of one-stop compliance, monitoring, recordkeeping and reporting requirements for specific emission points that would be referenced in future rulemakings for the chemical manufacturing and refining industries. The EPA desires to facilitate implementation and compliance by making requirements easier to understand, incorporating streamlined compliance approaches and applying these approaches across industry sectors. Currently, the chemical manufacturing and refining industries may be subject to multiple NSPS and NESHAP, including the Generic MACT (40 CFR part 63, subparts SS, TT, UU, and WW); the Miscellaneous Organic Chemical Manufacturing NESHAP (68 FR 63851, November 10, 2003) (MON); the Hazardous Organic NESHAP (59 FR 19402, April 22, 1994) (HON), the Organic Liquids Distribution (OLD) NESHAP (69 FR 5038, February 3, 2004); the Petroleum Refineries NESHAP (60 FR 43260, August 18, 1995); the Synthetic Organic Chemical Manufacturing Industry (SOCMI) rules (Standards of Performance for Volatile Organic Liquid Storage Vessels (52 FR 11429, April 8, 1987); Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry (48 FR 48335, October 18, 1983); and SOCMI Reactor Processes (58 FR 45962, August 31, 1993)). Several of these rules cover similar emission points, such as storage tanks, transfer operations, equipment leaks or process vents that route to a control device. As a result, facilities subject to two or more of these rules may have overlapping or confusing compliance requirements for the same emission point. Additionally, facilities may have burdensome recordkeeping and reporting requirements for multiple subparts to which they are subject. The proposed Uniform Standards revise and streamline the compliance approach for future rulemakings by applying a set of control and compliance methods that may be referenced from multiple subparts. In particular, the proposed Uniform Standards are structured so that facilities regulated under NSPS and NESHAP could reference the same cost-effective monitoring, recordkeeping and reporting requirements for storage tanks,

transfer racks, equipment leaks and process vents that route to a control device, provided the Uniform Standards are determined to be appropriate for the NSPS and NESHAP source categories (see section II.C of this preamble). By providing a consistent set of compliance, monitoring, recordkeeping and reporting requirements, the proposed standards would reduce the burden to the chemical manufacturing and refining industries. Additionally, applying these common emission point-specific requirements provides the benefit of easing the enforcement burden for government agencies.

The proposed 40 CFR part 65, subparts I, J and M also provide the groundwork for future rulemakings as a set of strengthened control and monitoring requirements that may be considered for use in future referencing subparts to meet MACT, GACT, AMOS or BSER. The proposed standards are based on a consolidation of existing requirements, but have been augmented where appropriate based on our survey of available technology and a review of existing regulations for each emission point. For example, under the proposed Uniform Standards for Storage Vessels and Transfer Operations, we are proposing to specify situations when landing a floating roof is allowable and the amount of time that a storage vessel with a landed floating roof may be left standing idle. These changes reduce the amount of time during which volatile regulated materials are exposed to the atmosphere and may be released. To improve detection of leaks on fixed roof storage tanks and thereby minimize emissions, we are also proposing to require monitoring for leaks from closure devices, pressure/vacuum vents and other potential leak interfaces on fixed roof storage vessels using Method 21 of 40 CFR part 60, appendix A–7, or optical gas imaging instead of visual inspections for defects. We are also proposing to include different delay of repair provisions in the proposed Uniform Standards for Equipment Leaks which specify that if a valve or connector cannot be repaired within 15 days, ''low leak technology'' must be used to repair the equipment when it is technically feasible to do so. ''Low leak technology'' that is available and cost effective includes replacing the valve packing, flange gaskets or the entire valve or connector. These requirements provide additional emissions reductions and could be referenced by future rulemakings as a means to meet applicable CAA requirements. The proposed Uniform Standards for Control Devices include strengthened provisions that require owners and operators of closed vent systems to provide monitoring for each bypass for pressure relief devices (PRD), low leg drains, high point bleeds, analyzer vents and open-ended valves or lines. We are proposing that this equipment is subject to the bypass line requirements to have a flow monitor or a car seal on each bypass line that could divert a vent stream to the atmosphere, thereby minimizing emissions from these points. The proposed requirements under 40 CFR part 65, subparts I, J and M have been designed to reflect advanced practices and control methods and provide robust air emissions control. This allows us to consider these proposed standards as a basis for review in future rulemakings for source categories with similar emission points. Further discussion of these provisions and other strengthened requirements under the Uniform Standards are included in the discussions for each individual subpart in sections III, IV and V of this preamble.

The proposed Uniform Standards also provide the benefits of improved compliance and enforceability. We are proposing to facilitate implementation and compliance by clarifying current requirements that were vague or confusing. For example, current equipment leak rules require facilities to equip open-ended valves or lines with a cap, blind flange, plug or second valve to prevent emissions. We have retained that requirement in the proposed Uniform Standards for Equipment Leaks, but we have added a requirement to check that the cap, blind flange, plug or second valve is installed or closed properly using Method 21 of 40 CFR part 60, appendix A–7 at least once a year to ensure compliance with the standard. The EPA is also proposing to clarify requirements in the Uniform Standards that were confusing during implementation of previous rules, such as the monitoring requirements for small boilers and process heaters that are not part of a fuel gas system (see discussion in section V.B.3 of this preamble). As another example, the proposed Uniform Standards for Equipment Leaks include all the types of equipment for which sensory monitoring is required in one section, which makes clear that the sensory monitoring requirements for all applicable types of equipment are identical. In other current standards, these requirements are spread throughout the rule, and slight differences in wording make it difficult to tell if the requirements are supposed to be the same. These clarifications are intended to improve compliance and enforceability as the Uniform Standards are considered during CAA 111 and 112 rulemakings and incorporated into future referencing subparts. Further clarifications are discussed in the individual subparts in sections III, IV and V of this preamble.

The proposed Uniform Standards also provide benefits as they reduce unproductive burden within the chemical and refining sectors. For example, the proposed Uniform Standards for Equipment Leaks include provisions to use optical imaging to monitor for leaks (where appropriate and allowed by the referencing subpart) instead of instrument monitoring. Because the optical gas imaging device can monitor many more pieces of equipment than conducting instrument monitoring in the same period of time, these provisions are expected to reduce the cost of labor required to meet the proposed Uniform Standards for Equipment Leaks. In particular, we have focused on simplifying recordkeeping and reporting requirements throughout each proposed subpart. For example, under the proposed General Provisions, we have specified that certain reports that are required to be submitted will be done so electronically, as discussed in sections II.F and VI.B.7 of this preamble. We are also proposing a revised record retention policy that allows that records can be maintained in electronic format and accessible within 2 hours of a request for the 5-year record retention period. We have not included different retention periods for onsite and offsite records because the ability to maintain electronic records removes the need for specifying the storage location. An electronic record can be stored either onsite or offsite, but still be quickly accessible from onsite.

Furthermore, we have developed the proposed Uniform Standards in keeping with the objectives of Executive Order 13563, *Improving Regulation and Regulatory Review,* issued January 18, 2011. Consistent with Executive Order 13563, the proposed standards are based on a thorough review of current regulations and reduce regulatory burden by consolidating and simplifying requirements, including eliminating duplicative requirements. These proposed standards further facilitate implementation and compliance by clarifying and improving current requirements, using new and streamlined compliance approaches and applying these approaches broadly. The proposed Uniform Standards also implement cost-effective control strategies without compromising environmental protection, and have

taken into consideration the latest control techniques. Finally, these standards provide a flexible, streamlined process for future rulemakings that will reduce burden and increase efficiency for both government regulators and industry.

E. How were the proposed Uniform Standards developed?

In keeping with previous emission point-specific and emissions control-specific subparts, we have structured the proposed Uniform Standards for 40 CFR part 65, subparts H, I, J and M to provide a common set of monitoring, testing, recordkeeping and reporting requirements. We intend the proposed Uniform Standards to provide common standards for environmental control that may be referenced from multiple regulations and that may be useful for a broad range of source categories. It is our view that the Uniform Standards will decrease inconsistencies between rulemakings for similar types of industries and reduce burden for both industry and government regulators.

In keeping with the requirements of Executive Order 13563, *Improving Regulation and Regulatory Review,* we reviewed the current Generic MACT standards of 40 CFR part 63, subparts SS, TT, UU, and WW; the MON (68 FR 63888, November 10, 2003); the HON (59 FR 19402, April 22, 1994); and other recent rules in the development of the proposed Uniform Standards. The Generic MACT standards of 40 CFR part 63, subparts SS, TT, UU, and WW were chosen as a starting point for the Uniform Standards because they were previously developed for the purpose of providing consistent requirements for storage vessels and transfer operations, equipment leaks and control devices used to control process vents that could be referenced by multiple NESHAP subparts, and they already incorporate technical improvements based on the EPA's experience with implementation of other subparts, such as the National Emission Standards for Petroleum Refineries (40 CFR part 60, subpart CC) and the HON. We augment these provisions in the proposed Uniform Standards by adding requirements from recent rulemakings, clarifying unclear requirements and incorporating alternative technologies and compliance approaches. As part of this process, we have investigated current practices and advances in technology and examined the cost effectiveness of applying certain technologies for control. Additionally, we reviewed the applicability determination index database, test reports, title V permit requirements, Office of Enforcement and Compliance Assurance experience and recent EPA decisions to identify cost-effective technological, monitoring and compliance approaches that would reduce burden across source categories. In this proposal, we are referring to the existing flare requirements in 40 CFR 63.11(b) of subpart A for flare compliance and are not proposing new flare requirements. We are continuing to gather data, review flare research papers and test reports, and investigate operating conditions that may influence the performance of a flare. Based on this information, we may in the future propose to add new flare requirements to the Uniform Standards.

As discussed in section II.B of this preamble, we expect that applying a common set of monitoring, testing and recordkeeping and reporting requirements to multiple source categories would be feasible because several source categories within the chemical and refining industries use similar process operations and have similar emission points. Specifically, various industries require the regulation of air emissions from storage vessel and transfer operations, equipment leaks and control devices. Although these industries may have variations in their process operations and the regulated materials used, these emission sources are generally amenable to similar methods for control and demonstration of compliance.

Our review of current regulations for storage vessel and transfer operations, equipment leaks and process vents found that these emission points often have similar requirements for the demonstration of compliance. In general, the mechanisms for release of emissions to the atmosphere from these emission points or emissions controls are similar, regardless of the specific regulated materials involved. With the knowledge of these similarities, we expect that compliance methods that have been determined to be cost effective for control of a specific amount of a given regulated material at one of the proposed emission points would generally be cost effective for the same regulated material at similar emission points, regardless of the source category. Specifically, the compliance methods proposed with the Uniform Standards have been developed with the consideration that they may be applied to emission points in a broad range of source categories. Although we considered how the proposed requirements would apply to petroleum refineries and chemical plants, we have structured the Uniform Standards to provide flexible compliance methods that could be useful for multiple industries. In determining the best and most cost-effective compliance methods, monitoring, and recordkeeping and reporting requirements for the proposed standards, we examined and drew guidance from current rules from many different source categories that contain storage vessel, transfer operations, equipment leaks, process vents, and a variety of control devices. These guiding rules are discussed further in sections III, IV and V of this preamble. While the current rules provide requirements for individual source categories with slight variations for the specific regulated materials and process methods used in the regulated industry, we propose that the Uniform Standards, which would consolidate consistent, cost-effective requirements from a wide range of compliance methods for the same emission points, could be easily and effectively applied to additional industries.

Because the proposed Uniform Standards are intended to supply general requirements for source category-specific subparts, we expect that as current NSPS and NESHAP are periodically reviewed for technology advancements, they may refer to the Uniform Standards for compliance monitoring, recordkeeping and reporting provisions. Review of both NSPS and NESHAP under the CAA authorizes us to consider the cost impacts of control. Therefore, in reviewing the current requirements for these emission points across source categories, we examined the cost effectiveness of the compliance methods. For example, we have considered the cost effectiveness of control methods for equipment leaks on a volatile organic compound (VOC) basis. The majority of the emissions from equipment leaks are the result of gases or vapors escaping through leaks, either because the process fluid itself is a gas or vapor or because the process fluid is a liquid that volatilizes easily. Therefore, VOC are a class of compounds that are representative of these types of emissions. The proposed Uniform Standards, as a whole, reflect our determination of the best and most cost-effective compliance and control options for the regulated materials generally expected at the proposed emission points.

To account for the differences between individual source categories, the proposed standards generally provide limited technical requirements for monitoring, testing, recordkeeping and reporting for the identified emission points. Overall, we have determined that the regulated materials, applicability requirements, emission

limits or control levels are best determined on a source category basis, as discussed in section II.C in this preamble, to reflect the specific needs of the source category. However, we are proposing applicability thresholds for the Uniform Standards for Storage Tanks (including size and vapor pressure) and control levels for the Uniform Standards for Equipment Leaks (including thresholds at which leaking equipment must be repaired, or ''leak definitions''). These thresholds are provided for consideration in future referencing subpart rulemakings, and would only apply if the referencing subpart does not specify an applicability threshold and/or control level. The referencing subpart may choose to refer to these thresholds in the Uniform Standards or may establish more appropriate thresholds for a specific source-category (overriding the Uniform Standards), as discussed in section II.C.

F. What are the electronic data submittal requirements?

Electronic reporting is becoming an increasingly common element of modern life (as evidenced by electronic banking and income tax filing), and the EPA is beginning to require electronic submittal of certain environmental data. Electronic reporting is already common in environmental data collection and many media offices at the EPA are reducing reporting burden for the regulated community by embracing electronic reporting systems as an alternative to paper-based reporting.

One of the major benefits of reporting electronically is standardization, to the extent possible, of the data reporting formats, which provides more certainty to users of the data required in specific reports. For example, electronic reporting software allows for more efficient data transmittal and the software's validation mechanism helps industry users submit fewer incomplete reports. This alone saves industry and regulatory agencies report processing resources and reduces transaction times. Standardization also allows for development of efficient methods to compile and store much of the documentation required to be reported under this rule.

We are proposing that certain reports required to be submitted through the Uniform Standards would be submitted electronically. These reports would include all performance test reports, continuous emission monitoring system (CEMS) performance evaluation reports, the 40 CFR part 65, subparts I and J portions of the Notification of Compliance Status, and semiannual periodic reports specified in 40 CFR part 65, subparts H, I, J and M. All other reports would be submitted in hard copy or other method mutually agreed to between the source and the delegated authority. We have reasoned that reporting elements that are descriptive and contain a high level of detail would not be easily incorporated into the electronic reporting system at this time. For a discussion of each of these various types of reports, see sections III, IV, V and VI of this preamble.

The availability of electronic reporting for sources subject to the Uniform Standards will provide efficiency, improved services, better accessibility of information and more transparency and accountability. Additionally, submittal of these required reports electronically provides significant benefits for regulatory agencies, industry and the public. The compliance data electronic reporting system is being developed such that once a facility's initial data entry into the system is established and a report is generated, subsequent data submittal would only consist of electronic updates to existing information in the system. Such a system would effectively reduce the burden associated with submittal of data and reports by reducing the time, costs and effort required to submit and update hard copies of documentation. State, local and tribal air pollution control agencies could also benefit from more streamlined and accurate electronic data submitted to them. Electronic reporting would allow for an electronic review process rather than a manual data assessment, making review and evaluation of the source-provided data and calculations easier and more efficient. Electronic reporting would also benefit the public by generating a more transparent review process and increasing the ease and efficiency of data accessibility. Furthermore, electronic reporting would reduce the burden on the regulated community by reducing the effort involved in data collection and reporting activities. With the complete information provided in electronic reports, we anticipate there will be a need for fewer and less substantial data collection requests in conjunction with prospective required residual risk assessments or technology reviews. We anticipate that using electronic reporting for the required reports will result in an overall reduction in reporting costs; specifically, we estimated potential savings in reporting costs for an existing chemical plant to be approximately $6,780 (or a 42-percent cost reduction in hard copy reporting required by existing rules). For further discussion of the economic and cost impacts of electronic reporting, see section VII.D of this preamble.

Another benefit of the proposed electronic data submittal is that these data will greatly improve the overall quality of existing and new emissions factors by supplementing the pool of emissions test data for establishing emissions factors and by ensuring that the factors are more representative of current industry operational procedures. A common complaint heard from industry and regulators is that emission factors are outdated or not representative of a particular source category. With timely receipt and incorporation of data from most performance tests, the EPA would be able to ensure that the updated emission factors become available to represent the most current range of operational practices.

We are proposing that data entry of these electronic reports would be through the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through the EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). Data transmitted electronically through CEDRI will be stored in CDX as an official copy of record. Once you have accessed CEDRI, you will select the applicable subpart for the report that you are submitting. You will then select the report type being transmitted, enter the data into the form and click on the submit button. In some cases, such as with submittal of a Notification of Compliance Status Report, you will select the report type, enter basic facility information and then upload the report in a specified file format.

In addition, we believe that there will be utility in allowing other reporting forms to be developed and used in cases where the other reporting forms can provide an alternate electronic file consistent with the EPA's form output format. This approach has been used successfully to provide alternatives for other electronic forms (*e.g.,* income tax transmittal). The proposal to submit performance test data electronically to the EPA would apply only to those performance tests conducted using test methods that will be supported by the electronic reporting tool (ERT) which can be accessed at *http://www.epa.gov/ttn/chief/ert/index.html.* The ERT contains a specific electronic data entry form for most of the commonly used EPA reference methods. A listing of the pollutants and test methods supported by the ERT is available at the ERT Web site listed above. A generic form is also available for test methods that are not specifically supported by ERT and you may submit performance tests with non-

listed test methods using the generic form.

In CEDRI, the user must then upload the ERT file. CEDRI transmits a copy of the ERT project data file directly to WebFIRE, where the data are made available. Where performance test reports are transmitted, WebFIRE notifies the appropriate state, local or tribal agency contact that an ERT project data file was received from the source.

In summary, in addition to supporting regulation development, control strategy development and other air pollution control activities, having an electronic database populated with these reports would save industry, state, local, tribal agencies and the EPA significant time, money and effort while also improving the quality of emission inventories and, as a result, air quality regulations.

III. Summary and Rationale for the Proposed 40 CFR Part 65 National Uniform Standards for Storage Vessel and Transfer Operations—Subpart I

A. Summary

We are proposing new Uniform Standards for control of emissions from storage vessels and transfer operations. These Uniform Standards would apply to a storage vessel or transfer operation only if that storage vessel or transfer operation is subject to a regulation that references such standards in proposed 40 CFR part 65, subpart I for control of air emissions from these sources. In section III of this preamble, the term ''we'' refers to the EPA and the term ''you'' refers to owners and operators of sources affected by the proposed standards. Additionally, ''subpart I'' refers to proposed 40 CFR part 65, subpart I. Section III.B provides our rationale for the proposed requirements.

1. What parts of my plant are affected by the proposed rule?

Proposed subpart I would apply to atmospheric storage vessels, pressurized vessels and transfer operations for which another subpart references such standards in this subpart for air emission control. Different vessel size and stored material maximum true vapor pressure (MTVP) thresholds are specified for the different control requirements for storage vessels. Different throughputs and transferred material MTVP thresholds are specified for the different control requirements for transfer operations. We are not proposing to specify a compliance timeline in this subpart, since the compliance period would depend upon the proposal and final rule effective dates of the referencing subpart; thus, the compliance timeline for implementing these standards, as specified in the referencing subpart, would apply for that source category.

As in current storage vessel rules, the proposed rule for storage vessels is based on design requirements, inspection requirements and emission standards. Current rules specify the size and vapor pressure thresholds that define which storage vessels must comply with the requirements. Similar thresholds are specified in proposed subpart I. As in current transfer operations rules, the proposed Uniform Standards for transfer operations are based on loading requirements, inspection requirements and emission standards. Current rules specify the size and vapor pressure thresholds that define which transfer operations must comply with the requirements. Similar thresholds are specified in proposed subpart I.

2. What are the proposed general requirements for complying with this subpart?

Your storage vessels and transfer operations would be subject to some or all of the requirements of subpart I when another subpart references the use of such requirements in subpart I for air emission control. In addition, you would be required to meet the general provisions applicable to 40 CFR part 65 (*i.e.,* subpart A of 40 CFR part 65) and the general provisions applicable to the referencing subpart (*i.e.,* subpart A of 40 CFR parts 60, 61 or 63).

Atmospheric storage vessels. Under proposed subpart I, you would be required to control emissions from each atmospheric storage vessel that contains regulated material (and is part of a regulated source subject to a referencing subpart). The type of control would depend on the size of the storage vessel and the MTVP of the stored regulated material. We are proposing four compliance approaches for each storage vessel that meets the capacity and MTVP thresholds presented in Table 1 of this preamble (and Table 1 of proposed subpart I). These approaches are: (1) Operate and maintain either an internal floating roof (IFR) or an external floating roof (EFR), provided the MTVP of the stored regulated material is less than 11.1 pounds per square inch absolute (psia); (2) operate and maintain a vapor balancing system on a fixed roof tank; (3) vent emissions from a fixed roof tank through a closed vent system to a control device according to the requirements in proposed 40 CFR part 65, subpart M; or (4) route emissions from a fixed roof tank to a fuel gas system. For each storage vessel that does not meet either set of thresholds described above, you would be required to operate and maintain a fixed roof (or you may elect to comply with the requirements for larger tanks that store regulated material with higher MTVP). Inspections and repair of defects and leaks would also be required for all storage vessels. Each of the four compliance approaches is discussed in further detail in sections III.A.4 through 7 of this preamble.

TABLE 1—CONTROL THRESHOLDS FOR ATMOSPHERIC STORAGE VESSELS

Comply with	If the storage capacity is	And the MTVP is
Requirements for fixed roof storage vessels in § 65.310	<20,000 gal, or	Any level.
	<40,000 gal, or	<1.9 psia.
	≥40,000 gal	<0.75 psia.
Any one of four compliance approaches specified in §§ 65.315, 65.320, 65.325 or 65.330.	≥20,000 gal, or	≥1.9 psia.
	≥40,000 gal	≥0.75 psia.

Transfer operations. If you own or operate a transfer rack that loads regulated material into transport vehicles (*i.e.,* cargo tanks or tank cars) or containers, you would have to control emissions from the transfer operations as specified in proposed subpart I. The specific control requirements would differ depending on the amount of regulated material transferred and the MTVP of the stored material. Details are discussed in sections III.A.9 and 10 of this preamble. The proposed rule does not specify requirements for loading regulated material into barges, which are currently regulated by the Marine Tank Vessel Loading Operations NESHAP (40 CFR part 63, subpart Y) and would remain so covered.

3. What are the proposed requirements for fixed roof atmospheric storage vessels that are small or store material that has a low vapor pressure?

For fixed roof atmospheric storage vessels that are smaller than 20,000 gallons, smaller than 40,000 gallons and store material with a MTVP less than 1.9 psia or greater than or equal to 40,000 gallons and store material with a MTVP less than 0.75 psia, you would have to meet specified equipment, operating, inspection and repair requirements. The proposed equipment requirements are to: (1) Install the fixed roof in a manner that would avoid creating open spaces between roof section joints or between the interface of the roof edge and the tank wall; and (2) equip each opening in the fixed roof with a closure device that, when secured in the closed position, allows no open spaces in the closure device or between the perimeter of the opening and the closure device. You would be required to operate the fixed roof with each closure device secured in the closed position except during those periods when access is needed. A conservation vent or similar device would be allowed to vent to the atmosphere when diurnal temperature changes or filling of the storage vessel cause pressure in the storage vessel to exceed the design range for the storage vessel (i.e., normal breathing and working emissions).

To demonstrate compliance with the equipment and operating requirements, you would be required to conduct initial and periodic monitoring of the fixed roof and its closure devices for leaks. For parts of the fixed roof that you determine are unsafe to monitor, you would have to develop a written plan in which you document why those parts are unsafe to monitor and that specifies a schedule for monitoring when it is safe to do so.

We are proposing two monitoring options. One option would be to use Method 21 of 40 CFR part 60, appendix A–7. This monitoring would be required annually, and you would detect a leak each time you obtain an instrument reading greater than 500 parts per million by volume (ppmv). The second option would be to use optical gas imaging. This monitoring would be required semiannually, and the instrument would have to be capable of detecting at least one of the compounds emitted from the storage vessel. A leak would be detected each time the instrument detects an image. This option also would reference a protocol for other requirements. We are currently developing the protocol and expect to propose it as appendix K to 40 CFR part 60. Public comment on the content of the proposed protocol will be requested in the **Federal Register** notice for the proposed protocol. In addition, we intend to provide an opportunity to comment on the application of appendix K to 40 CFR part 60 to the optical gas imaging provisions in these Uniform Standards. As discussed in section IV of this preamble, the protocol would also apply to optical gas imaging for equipment leaks. See section IV.A.5 of this preamble for a discussion of the information that we are planning to include in the protocol. Note, however, that the proposed bimonthly monitoring frequency for equipment leaks would not apply to monitoring of fittings on storage vessels.

If leaks are discovered in a storage vessel during an inspection, you have to either complete repairs or completely empty the storage vessel within 45 days, although you would be allowed up to two extensions of up to 30 days each. If you use an extension, you must maintain records that document your use of the extension. These records must indicate that alternative storage capacity was unavailable and list the actions you took in an effort to repair or empty the tank in the allowed period before the extension.

4. What are the proposed requirements to control atmospheric storage vessels with a floating roof (''floating roof approach'')?

If you elect to use a floating roof to control emissions from an atmospheric storage vessel that meets the size and MTVP thresholds for such control, you would have to comply with the proposed equipment, operating, inspection and repair requirements for floating roofs specified in this rule.

The proposed rule includes rim seal equipment requirements that are consistent with current rules. If you use an IFR, you would be required to equip the IFR with a liquid-mounted seal, mechanical shoe seal or two seals mounted one above the other. If you use an EFR, you would have to equip the EFR with a liquid-mounted seal and secondary seal, or with a mechanical shoe seal and secondary seal.

The proposed rule includes design and operation specifications for closure devices and other fittings for each type of opening through the deck of the floating roof. Most of these design and operational requirements for deck fittings are consistent with requirements in current rules. One difference is that the proposed rule explicitly specifies requirements for slotted ladder legs that are comparable to requirements for slotted guidepoles. Another difference is that the proposed rule defines automatic bleeder vents (vacuum breaker vent) to include both devices that are activated by pressure and vacuum differences across the floating roof and devices that are activated when an extension leg contacts the floor of the storage vessel. The proposed rule also includes additional control options for slotted guidepoles that were developed for the Storage Tank Emission Reduction Partnership Program (STERPP) (65 FR 19891, April 13, 2000).

The proposed rule would require that you equip each storage vessel with an alarm system that signals when the floating roof: (1) Is about to land on its legs or other support devices; or (2) is close to being overfilled. Each time the floating roof is landed, you would be required to estimate, record and report the amount of regulated material emitted during the time the roof was landed. Similarly, if the storage vessel is ever overfilled, you would be required to estimate, record and report the amount of regulated material spilled and emitted to the atmosphere.

The proposed rule would require that the floating roof be floating on the liquid surface at all times except for certain instances when the floating roof is being supported on leg supports or other support devices (landed). We are proposing to limit both the total amount of time and the circumstances under which the floating roof may be landed to: (1) During the initial fill; (2) when necessary for maintenance, inspection or to support a change to an incompatible liquid, provided you either begin refilling the storage vessel or begin actions to completely empty the storage vessel within 24 hours; (3) when actions to completely empty the storage vessel begin within 24 hours after the roof is landed in order to take the storage vessel out of service; or (4) if the vapors are routed through a closed vent system to a control device from the time the roof is landed until the roof is within 10 percent by volume of being refloated. Typically, once you begin refilling the storage vessel, you would not be allowed to suspend refilling or withdraw liquid until after the roof is refloated. The requirement for continuous refilling until the roof is refloated would not apply to a storage vessel that is used to store product from a batch process if the quantity of product from one batch is insufficient to refloat the roof, and the roof will be refloated when product from additional batches is added to the storage vessel. However, withdrawal of liquid from the storage vessel would still not be permitted until after the roof is refloated.

The proposed rule would require that you inspect the floating roof deck, deck fittings and rim seals. One option would be to conduct visual inspections, measure gaps in rim seals for an EFR and measure gaps between gaskets and the surfaces they are intended to seal for deck fittings on both IFR and EFR. The proposed rule also specifies that Method 21 of 40 CFR part 60, appendix A–7 may be used as an alternative to the deck fittings gap measurement requirements for either type of floating roof and the rim-seal gap measurements on EFR. Another proposed alternative to the deck fittings gap measurement requirements is optical gas imaging. Requirements for monitoring using optical gas imaging would be the same as discussed in section III.A.3 of this preamble for monitoring of fixed roofs. Monitoring using either optical gas imaging or Method 21 of 40 CFR part 60, appendix A–7 would be required while the floating roof is floating on the stored liquid. The proposed rule lists the conditions that would be considered inspection failure (*i.e.,* stored liquid on the floating roof; holes or tears in the primary or secondary seal; floating roof deck, deck fittings or rim seals that are not functioning as designed; failure to comply with the operational requirements; and excessive gaps).

The proposed rule includes inspection frequency requirements for both IFR and EFR. For IFR, you would have to inspect: (1) Before the initial fill of the storage vessel; (2) at least annually (tank top inspection only); and (3) each time the storage vessel is completely emptied and degassed (but no later than 10 years after the previous such inspection or no later than 5 years for IFR equipped with two rim seals). For EFR, you would have to inspect: (1) The primary and secondary rim seals and deck fittings within 90 days after the initial fill of the storage vessel; (2) the secondary seal, deck fittings and EFR at least annually; and (3) the primary seal no later than 5 years after the previous primary seal gap inspection. Delays in IFR and EFR inspection would be allowed if the storage vessel is out of service on the date 5 or 10 years after the last inspection, as applicable, provided the inspection is conducted prior to filling the storage vessel.

If you determine that it is unsafe to perform the EFR inspections specified in the rule, you would have to either perform the inspections no later than 30 days after making this determination, or remove the storage vessel from service no later than 45 days after making this determination. You may use up to two extensions (up to 30 days each) if the storage vessel cannot be emptied within 45 days, provided you document this decision, explain why it was unsafe to perform the inspection, document that alternative storage capacity is unavailable and provide a schedule of actions taken in an effort to completely empty the storage vessel during the extension period. Not completely emptying the storage vessel before the end of the second extension period would be a deviation.

In the event of an inspection failure, the proposed rule requires repair to correct the failure. In addition, if at times when you are not specifically conducting an inspection as required by the proposed rule, but you notice a condition that constitutes an inspection failure, you would be required to make the necessary repairs just as if the condition had been noted during a scheduled inspection. If you performed the inspection while the storage vessel was not storing liquid, you would have to complete repairs before refilling the storage vessel with liquid. If you performed the inspection while the storage vessel was storing liquid, you would have to complete repairs or remove the vessel from service within 45 days, but you would be allowed up to two extensions (up to 30 days each), as long as you document your decision to use the extension. The documentation would include a description of the failure, documentation that alternative storage capacity is unavailable and a schedule of actions taken in an effort to either repair or completely empty the storage vessel before the end of the applicable extension period. Not repairing or completely emptying the storage vessel before the end of the second extension would be a deviation.

You have the option to request the substitution of an alternate device for any of the seals and fittings specified in the floating roof approach, as long as the alternate device has an emission factor less than or equal to the emission factor for the specified device and the emission factor for the alternate device was determined under tests that accurately simulated the conditions under which the device will operate (*e.g.,* wind speed, temperature, pressure and filling rates).

5. What are the proposed requirements for control of fixed roof atmospheric storage vessels if I use vapor balancing (''vapor balancing approach'')?

If you elect to control emissions from a fixed roof atmospheric storage vessel by using vapor balancing, you would have to comply with the proposed design, operating, monitoring and repair requirements for vapor balancing specified in this rule. You would have to operate, maintain and inspect the fixed roof, and repair leaks as specified in section III.A.3 of this preamble. Unlike current rules, the proposed rule contains no requirements for offsite facilities that clean and/or reload the transport vehicles and barges.

Under the proposed vapor balancing approach, you would have to design and operate the vapor balancing system to route the vapors displaced from storage vessel loading to the transport vehicle used to fill the storage vessel. Each transport vehicle would have to have a current certification of pressure testing conducted in accordance with U.S. Department of Transportation (DOT) requirements, and you would have to keep records of these certifications. Barges would have to be pressure tested annually in accordance with procedures in the proposed rule; these procedures are consistent with requirements in the Marine Tank Vessel Loading Operations NESHAP (40 CFR part 63, subpart Y) and the Benzene Transfer Operations NESHAP (40 CFR part 61, subpart BB). You would be required to maintain copies of documentation showing that the required testing was performed. The fixed roof would have to meet the design and operating requirements described in section III.A.3 of this preamble.

Under the proposed operating requirements, liquid may be unloaded only when the transport vehicle's vapor-collection equipment is connected to the storage vessel's vapor balancing system. Also, no PRD on the storage vessel, transport vehicle or barge may be open during loading, and PRD on the storage vessel would not be allowed to open at any time as a result of diurnal temperature changes (*i.e.,* breathing losses would not be allowed). You would have to set PRD on storage vessels no lower than 2.5 pounds per square inch gauge (psig) in order to prevent breathing losses, unless you provide a rationale for a lower value in your notification of compliance. In addition, you would have to keep records of the pressure relief vent settings that prevent breathing losses from the storage vessel. All vapor connections and lines on the storage vessel would have to be equipped with closures that seal upon disconnect.

Most of the proposed requirements for inspecting, monitoring and repairing equipment in the vapor balancing system and the fixed roof are the same as for closed vent systems as described in section III.A.6 of this preamble. The only difference is that for vapor balancing systems you may elect to

comply with the alternative monitoring frequencies for batch operations in proposed 40 CFR part 65, subpart J if your vapor balancing system operates less than 75 percent of the hours during the year.

6. What are the proposed requirements for control of fixed roof atmospheric storage vessels if I route emissions through a closed vent system to a control device (''closed vent system approach'')?

If you elect to vent emissions from a fixed roof storage vessel through a closed vent system to a control device, you would have to comply with the proposed equipment, operating, inspection and repair requirements specified in this rule for these systems.

If your storage vessel and closed vent system are not in vacuum service, you would have to operate, maintain and inspect the fixed roof, and repair leaks as specified in section III.A.3 of this preamble, except that normal breathing and working emissions would not be allowed to vent to the atmosphere. Monitoring would not be required if the storage vessel and closed vent system are in vacuum service, but you would be required to demonstrate that vacuum is maintained by installing a pressure monitoring device and alarm as specified in proposed 40 CFR part 65, subpart J.

For the closed vent system, you would have to comply with the bypass line requirements specified in proposed 40 CFR part 65, subpart M, and you would be required to comply with requirements for equipment in regulated material service in proposed 40 CFR part 65, subpart J. Either equipment controls (*e.g.,* caps on open ended lines) or leak detection and repair (LDAR) would be required, as specified in 40 CFR 65.420 through 65.427 of proposed subpart J, except that sensory monitoring in 40 CFR 65.428 of proposed subpart J would be allowed for connectors if your referencing subpart does not require instrument monitoring for connectors. Note that the option in proposed subpart J to conduct sensory monitoring for equipment in regulated material service less than 300 hours per year (hr/yr) would not apply to equipment in the closed vent system. The proposed leak detection monitoring methods include either Method 21 of 40 CFR part 60, appendix A–7, or optical gas imaging in accordance with proposed 40 CFR 65.450 (provided your referencing subpart specifies that optical gas imaging is allowed for LDAR). Required monitoring and inspections would have to be conducted either when an affected storage vessel is being filled or at any other time the equipment in the closed vent system is in regulated material service. Any other potential sources of vapor leakage (*e.g.,* an access hatch) that are not defined as equipment would be subject to sensory monitoring and related repair requirements as specified in 40 CFR 65.428 and 65.430 of proposed subpart J.

For a non-flare control device, you would be required to comply with the provisions in proposed 40 CFR part 65, subpart M for the applicable control device and reduce regulated organic material emissions by at least 95 percent by weight or to an outlet concentration of regulated material less than 20 ppmv. To demonstrate initial compliance with this emission limit, proposed subpart I would allow you to conduct a design evaluation as an alternative to the performance test (note that the performance test is the default requirement in proposed subpart M). You would be required to comply with the provisions in 40 CFR 63.11(b) of subpart A for flares used to comply with the referencing subpart.

For those periods when you conduct planned routine maintenance of the control devices for your storage vessels, the proposed rule would require that you add no material to the storage vessel during those periods and limit the periods to a total of no more than 360 hr/yr. If you need more than 240 hr/yr, you would have to keep a record that explains why the extension was needed and describes how you minimized the amount of time beyond 240 hours. In addition, you would need to keep records of when the planned routine maintenance periods begin and end and the type of maintenance performed.

7. What are the proposed requirements for control of fixed roof atmospheric storage vessels if I route emissions to a fuel gas system (''fuel gas system approach'')?

If you elect to control storage vessel emissions by routing displaced vapor to a fuel gas system, you would be required to comply with the requirements for fuel gas systems, as specified in proposed 40 CFR part 65, subpart M. Specifically, you would be required to: (1) Submit a statement in your Notification of Compliance Status that the emission stream is connected to the fuel gas system; (2) meet the requirements for equipment in regulated material service in proposed 40 CFR part 65, subpart J for all equipment in the fuel gas system; (3) comply with proposed 40 CFR 65.724 for any small boilers or process heaters in the fuel gas system; and (4) not route halogenated streams to the fuel gas system. In addition, you would be required to operate, maintain and inspect the fixed roof, and repair leaks as specified in section III.A.3 of this preamble. The proposed procedures for inspecting or monitoring the equipment also are the same as for equipment in a closed vent system as described in section III.A.6 of this preamble.

8. What are the proposed requirements for pressure vessels?

The proposed rule defines a pressure vessel as a storage vessel that is designed not to vent to the atmosphere as a result of compression of the vapor headspace in the vessel during filling of the vessel to its design capacity. The proposed rule would require all openings in a pressure vessel to be equipped with closure devices. In addition, you would be required to conduct annual performance tests using either Method 21 of 40 CFR part 60, appendix A–7, or optical gas imaging to show pressure vessels operate with an instrument reading less than 500 ppmv (for Method 21 of 40 CFR part 60, appendix A–7) or no emissions are imaged by the instrument (for optical gas imaging). Each time you obtain an instrument reading equal to or greater than 500 ppmv (for Method 21 of 40 CFR part 60, appendix A–7) or emissions are imaged (for optical gas imaging), it would be a deviation of the emission limit, and you would be required to estimate, record and report the amount of regulated material emissions during the time the pressure vessel is out of compliance with the emission limit.

The proposed rule would require that all purge streams be routed through a closed vent system to a control device that reduces regulated material emissions by at least 98 percent or to an outlet concentration less than 20 ppmv. Inert material purging is a short duration maintenance procedure required by good engineering practice to ensure proper operation of this type of storage system. The closed vent system would be subject to the same bypass line requirements and monitoring and inspection requirements as for a closed vent system that conveys emissions from an atmospheric storage vessel to a control device; see section III.A.6 of this preamble for details. The proposed compliance requirements for a control device would be the same as for a control device that controls emissions from an atmospheric storage vessel; see section III.A.6 of this preamble for details.

9. What are the proposed requirements for control of transfer operations to load transport vehicles?

For each transfer rack that you use to load transport vehicles, you would be required to transfer the regulated material to the transport vehicles using submerged loading or bottom loading.

In addition, you would be required to control displacement emissions of regulated materials from the transport vehicles if you transfer more than 35 million gallons per year (gal/yr) of liquids with a weighted average MTVP greater than 4 psia. The proposed rule includes three compliance approaches for these emissions. One approach is to route the displaced emissions from the transport vehicle through a closed vent system to any combination of control devices. In this case, the proposed requirements are the same as those proposed for closed vent systems and control devices used to control emissions from storage vessels; see section III.A.6 of this preamble for details.

A second approach is to route the displaced emissions from the transport vehicle to a fuel gas system. Again, the proposed requirements are the same as the proposed requirements for storage vessels that are controlled by routing emissions to a fuel gas system.

The third approach is to design and operate a vapor balancing system to route vapors that are displaced from loading regulated liquids into transport vehicles back to the storage vessel or to another storage vessel that is connected to a common header. The proposed vapor balancing approach includes the following requirements: (1) Designing the vapor balancing system to prevent any regulated material vapors collected at one transfer rack from passing to another transfer rack; (2) equipping all vapor connections and lines in the vapor-collection equipment and vapor balancing system with closures that seal upon disconnect; (3) ensuring PRD in the system do not open while the transport vehicle is being filled with regulated material; (4) conducting the same LDAR procedures for equipment in the vapor balancing system as for equipment in a closed vent system; and (5) complying with the same bypass line requirements as in the proposed requirements for closed vent systems. You would not be allowed to use the vapor balancing approach if the applicable storage vessel has a floating roof.

Each transport vehicle that you load with regulated material that has a MTVP of regulated material greater than 4 psia would be required to pass an annual vapor tightness test conducted using Method 27 of 40 CFR part 60, appendix A–8. All other transport vehicles that you load with regulated material must either pass an annual vapor tightness test conducted using Method 27 of 40 CFR part 60, appendix A–8 or have a current certification in accordance with DOT pressure test requirements for cargo tanks or tank cars. You would be required to keep records of the DOT certifications and tests conducted using Method 27 of 40 CFR part 60, appendix A–8. You also would be required to take actions to assure that your vapor balancing system, closed vent system or fuel gas system is connected to the transport vehicle's vapor-collection equipment during each transfer of regulated material to transport vehicles.

10. What are the proposed requirements for control of transfer operations to load containers?

For each transfer of regulated material to a container at a transfer rack that loads only containers, you would be required, at a minimum, to use either submerged fill or fitted opening/transfer line purging. Whenever a container contains a regulated material, you would also be required to install and secure all covers and closure devices in the closed position, except when you need to access the container (e.g., for adding or removing material, sampling or cleaning). You would also be required to demonstrate annually that containers, 55 gallons and larger, that are loaded and then used for onsite storage are vapor tight by using one of two approaches. One approach is to use Method 27 of 40 CFR part 60, appendix A–8, under the same test conditions specified for testing transport vehicles, and the second approach is to monitor each potential leak interface on the container for leaks using Method 21 of 40 CFR part 60, appendix A–7. When monitoring using Method 21 of 40 CFR part 60, appendix A–7, an instrument reading greater than 500 ppmv would constitute a leak that you would be required to repair within 15 days.

We are proposing three more effective compliance approaches that you may elect to comply with as an alternative to conducting submerged filling. The first approach is to route emissions through a closed vent system to a control device in accordance with the same requirements that apply to closed vent systems and control devices that are used to control emissions from transfers to transport vehicles. The second approach is to design and operate a vapor balancing system that routes displaced vapors back to the storage vessel from which the transferred liquid originated. The requirements would be the same as for the vapor balancing approach for controlling emissions from transfers to transport vehicles. For example, vapor connection and lines in the vapor-collection equipment and vapor balancing system would have to be equipped with closures that seal upon disconnect. Any PRD on the container would have to remain closed while the container is being filled, and you would be required to comply with the same bypass line requirements and LDAR requirements for equipment in the vapor balancing system that are being proposed for closed vent systems. The third approach is to conduct the transfer operations inside a permanent total enclosure (meeting the criteria specified in 40 CFR 52.741, appendix B) that is vented through a closed vent system to a control device. The requirements for the closed vent system and control device would be the same as in the first approach described above.

11. What are the proposed recordkeeping and reporting requirements?

Recordkeeping. Proposed subpart I would require records related to both storage vessels and transfer operations. For each storage vessel that contains a regulated material, you would be required to record the vessel dimensions, storage capacity and type of stored material. In addition, proposed subpart I would require records related to each type of storage vessel and each compliance approach. Many of these records would require documentation of the dates and results of inspections (for fixed roofs, floating roofs, closed vent systems, fuel gas systems and vapor balancing systems), including descriptions of repairs or actions taken to remedy leaks or inspection failures.

Other records related to storage vessels would require documentation of: (1) The start and end dates of floating roof landing events and the procedure used to refloat the roof; (2) decisions to use extensions for inspections and repair/removal from service; (3) dates of each overfill event; (4) DOT certifications of vapor tightness tests for transport vehicles used to comply with the vapor balancing approach; (5) vapor tightness test results for barges used to comply with the vapor balancing approach; (6) date and time when periods of planned routine maintenance of a control device begin and end; and (7) identification of each potential source of vapor leakage in a closed vent system that is not defined as a piece of ''equipment.'' If you comply with closed vent system and control device requirements or fuel gas system

requirements specified in proposed 40 CFR part 65, subpart M, you would also be required to keep applicable records as specified in proposed subpart M. Similarly, if you comply with equipment monitoring requirements for a closed vent system or fuel gas system, or if you operate a closed vent system in vacuum service, you would be required to keep records that are related to these provisions, as specified in proposed 40 CFR part 65, subpart J. If you comply with the vapor balancing approach, you would be required to keep a record of the setting on the PRD that prevents breathing losses from the storage vessel. You would also be required to keep records of your estimates of emissions from: (1) Each spill caused by overfilling a storage vessel; (2) a storage vessel while the floating roof is landed; and (3) a pressure vessel that does not comply with the required emission limit.

For transfer operations, you would be required to keep records of vapor tightness tests of transport vehicles that are loaded with liquid that has a regulated material vapor pressure greater than 4 psia and DOT certifications of vapor tightness tests for other transport vehicles that are loaded with regulated material. If you comply with the approach to route emissions through a closed vent system to a control device or the fuel gas system approach, you would be required to keep records of monitoring, inspections and leak repairs, as specified in proposed 40 CFR part 65, subpart J, and you would be required to comply with the recordkeeping requirements specified in proposed 40 CFR part 65, subpart M, for the applicable control device. If you comply with the approach to load containers inside an enclosure, you would be required to keep records of the most recent calculations and measurements performed to verify that the enclosure meets the criteria of a permanent total enclosure, as specified in 40 CFR 52.741, appendix B.

Notification of Compliance Status. In the Notification of Compliance Status required by the referencing subpart and proposed 40 CFR part 65, subpart H, you would be required to include the identification of each storage vessel, its storage capacity and the liquid stored in the storage vessel. You would also be required to include identification of each transfer rack that loads regulated material into transport vehicles or containers. In addition, if you comply with the vapor balancing approach for a storage vessel (*i.e.,* proposed 40 CFR 65.320), and any PRD on that storage vessel is set to relieve at less than 2.5 psig, you would be required to provide rationale for why that setting is sufficient to prevent breathing losses from the storage vessel. Finally, if you comply with any provisions in 40 CFR part 65, subpart J or 40 CFR part 65, subpart M of the Uniform Standards, you must comply with any notification requirements related to those provisions that are specified in subpart J or subpart M.

Semiannual periodic report. Semiannual periodic reports must include: (1) Documentation of the date when a storage vessel was emptied or repaired if the action was not conducted before the end of a second extension period, as required in proposed 40 CFR 65.310(d) or 65.315(d); (2) storage vessel identification and the start and end dates of each floating roof landing that does not meet one of the criteria in proposed 40 CFR 65.315(b)(1); (3) a copy of the inspection report for a pressure vessel when you obtain an instrument reading greater than 500 ppmv when using Method 21 of 40 CFR part 60, appendix A–7, or an image of emissions when monitoring using optical gas imaging; and (4) any information required in semiannual periodic reports by proposed 40 CFR part 65, subpart J or proposed 40 CFR part 65, subpart M related to provisions in those subparts with which you comply.

Annual periodic reports. Annual periodic reports required by the referencing subpart must include the following information: (1) Inspection results for fixed and floating roofs when a failure or leak is detected; (2) estimated emissions each time a floating roof is landed; (3) estimated emissions each time a storage vessel is overfilled; (4) estimated emissions each time a pressure vessel fails a performance test; and (5) any information required in annual periodic reports by proposed 40 CFR part 65, subpart J or proposed 40 CFR part 65, subpart M related to provisions in those subparts with which you comply.

Other reports. We are proposing that you notify the Administrator at least 30 days prior to each planned inspection of rim seals and deck fittings in storage vessels. If an inspection is unplanned and you could not have known about the inspection 30 days in advance, then you would be required to notify the Administrator at least 7 days before the inspection. A delegated state or local agency may waive the requirement for notification of inspections.

B. Rationale

We developed the proposed requirements in subpart I based on a review of requirements in current federal and state rules, a survey of technology for controlling and monitoring emissions from storage vessels and transfer operations and an analysis of the cost impacts of various compliance approaches.

The rules listed in Table 2 of this preamble include many provisions that we have developed as the most effective provisions for controlling emissions from storage vessels and transfer operations. These provisions form the backbone of proposed subpart I. In addition, the Generic MACT subparts were already organized to be referenced from source category-specific subparts. One difference between the Generic MACT rules and the proposed rule is how the storage vessel and transfer rack operating condition thresholds for a particular control requirement are specified. The Generic MACT relies on the referencing subpart to specify the range of characteristics that a storage vessel or transfer rack must possess to be subject to a particular control requirement. Conversely, proposed subpart I specifies both the thresholds and control requirements that would apply to storage vessels and transfer racks at any facility that is subject to a referencing subpart that incorporates those Uniform Standards provisions. If, while developing a referencing subpart, we identify a reason to select a different threshold for that source category (such as a difference driven by a prior MACT, AMOS or BSER decision for that subcategory), we would specify that threshold in the referencing subpart and indicate it applies in place of the threshold specified in proposed subpart I. The proposed subpart I thresholds and corresponding control requirements were determined based on the survey of technology and the cost impacts analysis; typically, the proposed requirements represent the best level of emission reduction for which we determined the costs are reasonable for model storage vessels and transfer racks.

Another overarching difference between proposed subpart I and the Generic MACT subparts is that proposed subpart I was organized to be consistent with the ''plain language'' format that we have adopted since the Generic MACT rules were promulgated. The following sections describe the rationale for the proposed provisions in subpart I.

TABLE 2—RULES USED TO DEVELOP REQUIREMENTS IN PROPOSED SUBPART I

Provisions in proposed subpart I	Current rule used as starting point for the proposed provisions
Floating roofs	National Emission Standards for Storage Vessels (Tanks)—Control Level 2 (40 CFR part 63, subpart WW; ''Generic MACT for Tanks Level 2'')
Fixed roofs	National Emission Standards for Tanks—Level 1 (40 CFR part 63, subpart OO; ''Generic MACT for Tanks Level 1'')
Vapor balancing	National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing (40 CFR part 63, subpart FFFF; ''MON'')
Pressure vessels	National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations (40 CFR part 63, subpart DD)
Transfer to transport vehicles	National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline) (40 CFR part 63, subpart EEEE; ''OLD NESHAP'')
Transfer to containers	National Emission Standards for Containers (40 CFR part 63, subpart PP; ''Generic MACT for Containers'')

1. How is the EPA proposing to define the term ''storage vessel?''

We are proposing a definition of ''storage vessel'' that is generally consistent with the definition in the Generic MACT for Tanks Level 2, in that it means ''a stationary unit that [* * *] is designed to hold an accumulation of liquids or other materials.'' The definition also contains many of the same elements as definitions in many rules in 40 CFR part 63. For example, the proposed definition excludes vessels permanently attached to a motor vehicle, vessels containing regulated material only as impurities and wastewater tanks. Differences between the proposed definition and the definition in the Generic MACT for Tanks Level 2 and most other rules in 40 CFR part 63 are that the proposed definition specifically excludes process tanks, and it does not exclude pressure vessels. We excluded process tanks from the proposed definition because such vessels are in operation only when the process is operating, and they generally operate at process temperatures without the potential for significant emissions due to diurnal temperature changes. As a result, their emissions are more like other process vent emissions than storage tank emissions. We are proposing to include pressure vessels as a subset of storage vessels because we are proposing requirements for pressure vessels that differ from the requirements for atmospheric storage vessels. Proposed 40 CFR part 65, subpart H also defines both ''pressure vessel'' and ''atmospheric storage vessel.''

We request comment on the clarity of this definition and the effect it would have if it were to apply in place of the current definitions in rules that could someday reference proposed subpart I for storage vessel requirements. In particular, we are interested in identification of any types of materials stored that could become subject to a rule that are not currently subject under a current rule's definition.

2. How did the EPA determine the applicability thresholds and control approaches for atmospheric storage vessels?

As discussed in section III.A.2 of this preamble, any one of four specified compliance approaches would be required to control emissions from each atmospheric storage vessel that exceeds any pair of tank capacity and regulated material MTVP thresholds in Table 1 of proposed subpart I. Emissions from all other storage vessels that contain regulated material would have to be controlled using either any of these same four approaches or by equipping the storage vessel with a fixed roof that meets specified design and operation criteria.

As part of our survey of technology, we estimated impacts for several control options for typical fixed roof storage vessels and EFR storage vessels. One purpose of the analysis was to determine applicable thresholds above which the costs for each control option are reasonable. Consistent with requirements in current rules, the thresholds we examined were the vessel size and the vapor pressure of the stored material.

All of the control options that we evaluated involved variations in the requirements for floating roofs or changes to the storage vessel. We focused on floating roof controls because these are the most common controls currently in use, and the only feasible options for baseline EFR storage vessels. We did not estimate costs for the other compliance approaches for fixed roof storage vessels for various reasons. We did not estimate the costs to connect fixed roof storage vessels to a closed vent system and control device because these costs have been shown in previous analyses to exceed the costs of floating roofs (*e.g.,* see EPA–450/3–81–003a, EPA–450/3–80–025 or the memorandum titled *MACT Floor, Regulatory Alternatives, and Nationwide Impacts for Storage Tanks at Miscellaneous Organic Chemical Manufacturing Facilities,* in item II–B–28 in docket A–96–04). Many atmospheric fixed roof storage vessels are designed to operate at pressure much lower than the 2.5 psig set pressure for PRD that is required in vapor balancing options. Therefore, we did not estimate costs for vapor balancing because this approach is technically feasible for only a subset of atmospheric storage vessels. We did not estimate costs for routing storage vessel emissions to a fuel gas system because this option would not be available at some facilities. Furthermore, the performance of these other control techniques is expected to be the same or only marginally superior to the performance of IFR, particularly for larger storage vessels and storage vessels storing material with higher vapor pressures.

In the impacts analysis for fixed roof storage vessels, Control Option ST1 was installation of a typical IFR with typical rim seals and deck fittings, except that we varied the type of guide pole (none, solid and slotted). We assumed typical IFR are constructed from bolted aluminum panels, that the deck floats on pontoons and that the rim seal is a mechanical shoe seal. Based on information in AP–42 chapter 7, we assumed that even without a regulatory driver, roof legs, sample wells, stub drains and vacuum breakers typically are controlled in a manner consistent with the requirements in current rules such as 40 CFR part 63, subpart WW. Control Option ST2 was to upgrade other fittings, as necessary, with gasketed covers, wipers and other features needed to meet requirements in current rules such as subpart WW. Additional controls were applied under control Option ST2 only for column wells, ladder wells, guidepoles,

automatic gauge float wells and access hatches. Current rules allow a variety of control options for slotted guidepoles. In this analysis, we assumed for Option ST2 that controlled slotted guidepoles in IFR storage vessels are equipped with a gasketed cover, pole sleeve and pole wiper. Note that Control Option ST2 is also a control option for a storage vessel that is currently equipped with a typical IFR.

We assumed the baseline EFR storage vessel is equipped with a single rim seal (mechanical shoe) and typical fittings, except that we varied the type of guide pole (either solid or slotted). For such vessels, Control Option ST3 was to install a secondary rim seal, which we assumed would be rim-mounted. Control Option ST4 was to upgrade fittings, like in Control Option ST2 for fixed roof storage vessels. In this case, additional controls were applied under Control Option ST4 only for guidepoles and automatic gauge float wells because other fittings typically would be controlled to current regulatory levels in the absence of a regulatory driver. For this analysis we assumed that controlled slotted guidepoles in EFR storage vessels are equipped with gasketed covers and flexible enclosures. Proposed subpart I would allow a variety of compliance approaches for slotted guidepoles; we elected to evaluate a flexible enclosure in the impacts analysis because it shows a net cost savings even for the most costly approach. Control Option ST5 was to install a dome over storage vessels that meet the Control Option ST4 requirements.

We estimated baseline and controlled emissions using the AP–42 procedures. Inputs for the analysis included meteorological conditions for Houston, Texas, and typical throughputs obtained from a survey of the chemical manufacturing industry (see EPA–450/3–80–025). Costs were obtained from vendors. Table 3 of this preamble summarizes the cost- effectiveness estimates of the two control options for three sizes of model fixed roof storage vessels storing materials with a range of vapor pressures. Table 4 of this preamble shows the cost-effectiveness estimates of the three control options for model EFR storage vessels. Table 4 of this preamble also shows that the cost of Control Option ST5 (adding a dome over an EFR storage vessel that is already complying with Control Options ST3 and ST4) are unreasonable for all model vessels in the analysis; therefore, we rejected this control option from further consideration. Although we evaluated a variety of guide pole scenarios, as discussed above, the results in Table 3 of this preamble are for model storage vessels with a solid guide pole, and the results in Table 4 of this preamble are for model storage vessels with a slotted guide pole; the results for the other guide pole scenarios were not significantly different, and they would not lead to different conclusions. See the memorandum titled *Survey of Control Technology for Storage Vessels and Analysis of Impacts for Storage Vessel Control Options,* in the docket for proposed subpart I for a more detailed discussion of how these impacts were developed.

TABLE 3—ESTIMATED COST EFFECTIVENESS OF CONTROL OPTIONS ST1 AND ST2 FOR MODEL FIXED ROOF STORAGE VESSELS

Model storage vessel size (gal)	Cost effectiveness[a] ($/ton)			
	Vapor pressure at 25 degrees Celsius (psia)			
	0.5	0.75	1.9	3.0
Control Option ST1				
20,000	16,300	8,800	2,100	1,100
40,000	6,300	3,300	1,300	730
200,000	1,100	600	140	70
Control Option ST2				
20,000	18,900	12,000	4,200	2,500
40,000	17,900	11,800	4,600	2,900
200,000	19,000	12,000	4,200	2,500

[a] The cost-effectiveness values for Control Option ST2 are incremental relative to Control Option ST1.

TABLE 4—ESTIMATED COST EFFECTIVENESS OF CONTROL OPTIONS ST3, ST4 AND ST5 FOR MODEL EFR STORAGE VESSELS

Model storage vessel size (gal)	Cost effectiveness ($/ton)[a]			
	Vapor pressure at 25 degrees Celsius (psia)			
	0.5	0.75	1.9	3.0
Control Option ST3				
20,000	13,500	9,200	3,800	2,500
40,000	13,000	8,600	3,300	2,100
200,000	10,500	6,800	2,600	1,600
Control Option ST4				
20,000	(450)	(580)	(760)	(800)
40,000	(360)	(510)	(720)	(780)
200,000	(5)	(260)	(610)	(700)

TABLE 4—ESTIMATED COST EFFECTIVENESS OF CONTROL OPTIONS ST3, ST4 AND ST5 FOR MODEL EFR STORAGE VESSELS—Continued

Model storage vessel size (gal)	Cost effectiveness ($/ton) [a]			
	Vapor pressure at 25 degrees Celsius (psia)			
	0.5	0.75	1.9	3.0
Control Option ST5				
20,000	100,000	71,000	32,000	21,000
40,000	110,000	74,000	31,000	20,000
200,000	120,000	78,000	33,000	21,000

[a] The cost-effectiveness values for Control Option ST4 are incremental relative to Control Option ST3, and the cost-effectiveness values for Control Option ST5 are incremental relative to Control Option ST4.

Current rules specify requirements comparable to the combined requirements in Control Options ST1, ST2, ST3 and ST4 for atmospheric storage vessels, but the size and vapor pressure thresholds in the rules vary. For comparison purposes, the HON requires control of emissions from storage vessels with a capacity of at least 40,000 gallons that store material with a vapor pressure of at least 0.75 psia, and storage vessels with a capacity of at least 20,000 gallons that store material with a vapor pressure of at least 1.9 psia. Tables 3 and 4 of this preamble show the incremental cost impacts for storage vessels at these thresholds range from a cost savings for Control Option ST4 to $12,000/ton for storage vessels storing material with a vapor pressure of 0.75 psia under Control Option ST2.

Although cost effectiveness is an important consideration in establishing thresholds for proposed subpart I, we also considered the practicality of setting thresholds less stringent than the thresholds in the HON and other current rules. This would be impractical because, when those rules are amended to reference the Uniform Standards, they would have to override such thresholds in order to satisfy statutory MACT, AMOS and other regulatory requirements. Therefore, we have decided to propose the thresholds that are used in the HON (see Table 1 of this preamble). These thresholds are widely applicable because many current rules reference the HON, and we think they represent the best choice as defaults for the Uniform Standards. We request comment on this decision.

For most chemical manufacturing facilities, the costs to comply with the combined requirements of Control Options ST1, ST2, ST3 and ST4 for atmospheric storage vessels above the proposed thresholds are expected to be zero or minimal because they are already subject to current rules that have the same or similar thresholds and control requirements. However, many storage vessels at petroleum refineries are subject to 40 CFR part 63, subpart CC, which does not require control of deck fittings (*i.e.,* Control Options ST2 and ST4). Based on information provided by petroleum refiners in response to an information request, we determined that nationwide there are approximately 2,400 storage vessels with an EFR and 1,400 storage vessels with an IFR that meet or exceed the proposed thresholds in Table 1 of this preamble and about 60 percent of these storage vessels have slotted guidepoles (see the petroleum refinery database in Docket ID No. EPA–HQ–OAR–2010–0682). About 50 percent of the IFR storage vessels that have slotted guidepoles are controlled, and about two-thirds of the EFR storage vessels that have slotted guidepoles are controlled. We assumed all of the other fittings have typical controls (*i.e.,* consistent with Control Options ST1 and ST3). We also assumed each EFR is equipped with two rim seals, as required in 40 CFR part 63, subpart CC, and in Control Option ST3. To estimate current annual emissions, we first represented each storage vessel with one of four model sizes. Each model storage vessel also was assigned one of four model liquids, depending on the reported vapor pressure of the actual stored liquid. Storage vessels containing liquids with the lowest vapor pressures were represented with methyl ethyl ketone. The other storage vessels were organized into three groups, each of which was represented with a different grade of gasoline.

We estimated the current and controlled emissions for each model-refinery storage vessel using the AP–42 procedures and other assumptions, as described above in the discussion of the analysis to establish thresholds for control. We estimated costs to upgrade fittings for each storage vessel using the same information that we used in the analysis to establish thresholds for control. We also applied a product recovery credit of $500/ton of VOC to the prevented emissions. The emission reductions associated with upgrading the deck fittings on EFR storage vessels, particularly slotted guidepoles, resulted in a product recovery credit that exceeded the estimate of all costs associated with Control Options ST2 and ST4. Thus, the nationwide impacts of the control options for petroleum refineries is a cost savings of about $350/ton of VOC controlled. See the memorandum titled *Survey of Control Technology for Storage Vessels Analysis of Impacts for Storage Vessel Control Options,* in the docket for proposed subpart I for additional discussion of how these impacts were developed.

3. How did the EPA determine the control and compliance requirements for fixed roof atmospheric storage vessels?

All atmospheric storage vessels below the capacity and MTVP thresholds noted in section III.A.2 of this preamble would have to be equipped with a fixed roof. Although most current rules do not specify standards for such storage vessels, we expect that storage vessels at facilities that may in the future be subject to rules that reference the Uniform Standards already meet this proposed requirement. Thus, we do not expect any cost or emission impacts to meet this requirement. We request comment on the accuracy of this assumption.

The design and operating requirements that we are proposing for fixed roofs are based on the requirements in the Generic MACT for Tanks Level 1. However, we are proposing the seven changes to the requirements in the Generic MACT for Tanks Level 1, described below, to control more effectively fugitive emissions, simplify requirements and enhance consistency with requirements for storage vessels that may be subject to other sections in proposed subpart I.

First, we are not proposing to specify suitable materials for the fixed roof and closure devices. We decided that these decisions are best left to you and the storage vessel manufacturer. You would have the flexibility to choose whatever materials work best in your situation, provided you meet the design and operational requirements in proposed subpart I.

Second, like the Generic MACT for Tanks Level 1, proposed subpart I would allow opening of a closure device or removal of the roof when needed to provide access. The Generic MACT for Tanks Level 1 specifies that the closure devices may be opened to provide access for ''performing routine inspection, maintenance, or other activities needed for normal operations'' and ''to remove accumulated sludge or other residues from the bottom of the tank.'' In proposed subpart I, we use an edited version of these statements to clarify that the opening is allowed for ''manual operations that require access such as inspections, maintenance, sampling, and cleaning.'' A related difference between the Generic MACT for Tanks Level 1 and the proposed rule is that the proposed rule does not explicitly state that the closure device must be secured in the closed position or the roof reinstalled when the activity that requires access is complete. Such a statement is unnecessary, because the inverse of the provision allows openings when access is needed. The proposed rule clearly states that closure devices must be closed at all times except when access is needed.

Third, as in the Generic MACT for Tanks Level 1, proposed subpart I would allow you to route emissions from an opening through a closed vent system to a control device as an alternative to equipping the opening with a closure device. However, the Generic MACT for Tanks Level 1 does not specify compliance procedures for this control option. To ensure that emission reductions are consistent and quantifiable when a control device is used, we are proposing to require compliance with the procedures in proposed 40 CFR 65.325 for closed vent systems and control devices.

Fourth, the Generic MACT for Tanks Level 1 specifies at 40 CFR 63.902(c)(3) that opening of a safety device is allowed at any time. This provision was not included in proposed subpart I because the referencing subparts will address malfunctions.

Fifth, we are proposing delay of repair provisions that differ from the requirements in the Generic MACT for Storage Tanks Level 1. The primary difference between the Generic MACT for Storage Tanks Level 1 and proposed subpart I is the time allowed to complete repair. The Generic MACT for Tanks Level 1 allows delay as long as the owner or operator demonstrates that alternative tank capacity is not available to accept the regulated material from the tank that needs to be repaired, whereas the proposed rule would allow a maximum delay of 105 days (45 days plus up to two extensions of up to 30 days each). We have determined that 105 days is sufficient time to empty the tank, either to other existing tanks on site or to temporary storage, if necessary. Furthermore, current rules (and proposed subpart I) already include such requirements for repair of any floating roof, and applying the same requirements for fixed roof storage tanks would promote consistency and reduce the likelihood of inadvertent compliance errors. Sixth, we are proposing to require periodic monitoring of each potential source of vapor leakage from the fixed roof and fittings on the roof instead of annual visual inspections for defects. The monitoring could be conducted annually using Method 21 of 40 CFR part 60, appendix A–7 or semiannually using optical gas imaging (after promulgation of the protocol that we are developing for 40 CFR part 60, appendix K). See sections III.A.3 and IV.A.5 of this preamble for discussions of the protocol. Repairs would be required for each leak. A leak would be defined as any instrument reading greater than 500 ppmv when monitoring using Method 21 of 40 CFR part 60, appendix A–7, or any emissions imaged when using an optical gas imaging instrument. We are proposing this monitoring change to better control fugitive emissions. As documented in the docket for proposed subpart I, EPA inspectors have often found significant leaks from fittings by sensory means (particularly olfactory) and optical gas imaging when visual inspections indicate the gaskets and other elements of closure devices appear to be sound, and the conservation vent is not actively releasing to relieve increased pressure caused by diurnal temperature changes or filling the storage vessel (see the memorandum titled *Leaks Observed From Fixed Roof and Floating Roof Fittings,* in the docket for proposed subpart I).

The estimated annual costs, emission reductions and cost-effectiveness values for the three monitoring options are shown in Table 5 of this preamble. The estimated cost-effectiveness values for monitoring using either optical gas imaging or Method 21 of 40 CFR part 60, appendix A–7 are less than $230/ton per storage vessel, which we determined is reasonable. Note that the emission reductions for these two options are relative to estimated uncontrolled emissions. We lack the data needed to attempt to quantify the reductions for the visual inspections option, but we expect the reductions to be significantly less than for the other two options given the results of agency inspections noted above.

The impacts were estimated for a representative fixed roof storage vessel with eight fittings on the roof (an access hatch, gauge hatch, conservation vent, emergency pressure relief vent and four other miscellaneous types of valves and instruments). Costs were estimated assuming a visual inspection takes an average of 30 minutes and the other monitoring options take between 40 minutes and an hour, depending on the size of the facility at which the storage vessel is located. Based on the results of agency inspections, we estimated that initial optical gas imaging would find about 0.5 leaking fittings per storage vessel, and that monitoring with Method 21 of 40 CFR part 60, appendix A–7, would find an average of about 1 leaking fitting per storage vessel. We assumed that subsequent monitoring would find about 5-percent leaking fittings if optical gas imaging is conducted semiannually and monitoring with Method 21 of 40 CFR part 60, appendix A–7, is conducted annually. As in equipment leak analyses, repair costs were estimated assuming 75 percent of the leaks could be eliminated by a simple adjustment to the fitting and that 25 percent of the fittings would require a more extensive repair or replacement. Recordkeeping costs were estimated assuming 1 hr/yr to document the results of visual inspections and 0.5 hr/yr to document the results of the other monitoring options. Reporting costs were estimated assuming 0.5 hour per reporting period, to include records in annual periodic reports of inspections of each storage vessel for which a leak was found, and that 40 percent of the storage vessels have one leaking fitting each year (*i.e.,* 5 percent of the fittings are found to be leaking, and each tank has an average of eight fittings). Uncontrolled emissions for the conservation vent, emergency pressure relief vent and miscellaneous valves were estimated using average emission factors from the *Protocol for Equipment Leaks Emission Estimates* (EPA–453/R–95–017) for such equipment in the SOCMI. Uncontrolled emissions for access hatches and gauge hatches were approximated using AP–42 factors for such fittings on EFR

(unbolted, gasketed cover for access hatches and gasketed, weighted mechanical actuation gauge hatches). Controlled emissions were estimated assuming the percent reduction in emissions equals the percent reduction in the number of fittings found to be leaking.

TABLE 5—ESTIMATED IMPACTS OF MONITORING OPTIONS FOR FIXED ROOF STORAGE VESSELS

Monitoring option	Total annual cost ($/yr)	Emission reduction relative to uncontrolled (tpy)	Cost effectiveness ($/ton)	Incremental cost effectiveness ($/ton)
Visual	120	unknown	unknown	N/A
EPA Method 21	170	1.1	150	unknown
Optical gas imaging	260	1.1	230	undefined

tpy means tons per year.
N/A means not applicable.

We request comment, with supporting rationale, on all aspects of the proposed requirements for fixed roof storage vessels that store regulated material. We are particularly interested in comment on the proposed monitoring requirements. For example, itemized cost estimates, data on mass emissions from leaks and information about the types of initial repairs that would be needed and the expected frequency of replacements would be useful. Comparisons of results obtained using both Method 21 of 40 CFR part 60, appendix A–7, and optical gas imaging are requested.

4. How did the EPA determine the proposed requirements for atmospheric storage vessels that are controlled using an IFR or EFR?

As noted in section III.A.2 of this preamble, we are proposing four different compliance approaches for atmospheric storage vessels that exceed specified capacity and MTVP thresholds. One of these approaches is to use a floating roof. The requirements that we are proposing for this approach in proposed 40 CFR 65.315 are essentially the same as the requirements in the Generic MACT for Tanks Level 2. We are proposing additional requirements and clarifications as described below.

Rim seal design. The Generic MACT for Tanks Level 2 specifies alternative rim seal configurations for IFR and EFR storage vessels at 40 CFR 63.1063(a)(1)(i) and (ii). However, if certain conditions are met, 40 CFR 63.1063(a)(1)(i)(D) and (ii)(C) specify that full compliance with these configurations is not required for existing tanks until the next time the storage vessel is completely emptied and degassed or 10 years after promulgation of the referencing subpart, whichever occurs first. The storage vessel provisions in 40 CFR 63.119(b) and (c) of the HON contain the same provision. We are not proposing this delayed compliance provision because we expect most rules that reference the Uniform Standards will be amended versions of current rules, and these amended rules will not reference the Uniform Standards until more than 10 years after their original promulgation. Thus, all existing storage vessels that are subject to a referencing subpart should already be equipped with the required rim seals before they become subject to the Uniform Standards.

One of the objectives of rim seals is to help fill the annular space between the rim of the floating roof and the wall of the storage vessel thereby minimizing evaporative losses from this area. To meet this objective, rim seals must be constructed of a material that is impermeable to the stored material or any components of the stored material. A rim seal that is saturated with (or has been plasticized by) stored liquid would constitute an inspection failure because the rim seal would not be functioning as designed. In proposed subpart I, this requirement is specified in section 65.315(c)(1)(iii). We request comment on whether explicitly stating in subpart I that rim seal material saturated with (or plasticized by) stored liquid constitutes an inspection failure would help clarify this requirement. We also request comment on other possible approaches for clarifying this requirement. In addition, we are interested in strategies that could minimize repeated use of seal materials that are demonstrated to be less reliable than others. For example, we request comment on the feasibility and potential effectiveness of requiring more frequent inspections if a seal that failed during the first 5 years of use is replaced with a seal made from the same material.

Sample well requirements. The Generic MACT for Tanks Level 2 specifies at 40 CFR 63.1063(a)(2)(v) that each sample well and each deck drain that empties into the stored liquid may be equipped with a slit fabric seal or similar device that covers at least 90 percent of the opening instead of a deck cover. In other rules, such as the CAR, the HON and Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 (40 CFR part 60, subpart Kb; ''NSPS Kb''), the option for sample wells to use a slit fabric cover applies only for IFR. Therefore, to clarify the requirement, we are proposing to split the requirements for sample wells and deck drains into two paragraphs in subpart I. As an alternative to using a gasketed deck cover, proposed 40 CFR 65.315(a)(3)(v) specifies that sample wells in IFR may be equipped with a slit fabric seal (or similar device) that covers at least 90 percent of the opening. Proposed 40 CFR 65.315(a)(3)(vi) specifies that each opening for a deck drain (in any floating roof) that empties into the stored liquid must be equipped with a slit fabric (or similar device) that covers at least 90 percent of the opening.

Control requirements for guidepoles. The Generic MACT for Tanks Level 2 specifies in 40 CFR 63.1063(a)(2)(vii) that each unslotted guide pole shall be equipped with a gasketed cap on the top of the guide pole. We are proposing an alternative to this provision for proposed 40 CFR 65.315(a)(3)(viii) to indicate that a welded cap is an acceptable alternative to a gasketed cap for anti-rotational devices. The cap may be welded on an unslotted guide pole because such a guide pole is not used for gauging the liquid level. Emissions reductions are expected to be the same for both types of caps.

As part of the STERPP, we offered to enter into agreements with companies that have installed or will install controls to reduce their slotted guide pole emissions from storage vessels that

are subject to Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984 (40 CFR part 60, subpart Ka) or NSPS Kb. During development of the program, we identified two additional slotted guide pole control options that are not included in the Generic MACT for Tanks Level 2. The STERPP included these options because their performance was determined to be comparable to the performance of other control options already specified in the rules. One of the new options is to use a flexible enclosure device that completely encloses the slotted guide pole and a cover on the top of the guide pole. The second new option is to install an internal guide pole sleeve, a pole wiper and a cover on the top of the guide pole. We are proposing to include both of these options in proposed 40 CFR 65.315(a)(3)(ix). As discussed above for unslotted guidepoles, the cover may be either gasketed or welded. There is no cost impact associated with these control options because these options are providing compliance flexibility without imposing new requirements.

Control requirements for slotted ladder legs. Many IFR tanks have a ladder with one slotted leg so that the leg can also be used for gauging and/or sampling. Current rules specify that ladder wells must have gasketed sliding deck covers, and slotted guidepoles must be controlled using any one of several techniques. However, current rules do not explicitly specify requirements for slotted ladder legs. Therefore, we are proposing to require any one of three options for this type of fitting. One option is to use a pole float in the slotted leg and pole wipers for both legs. A second option is to use a ladder sleeve and pole wipers for both legs. The third option is to use a flexible device that completely encloses the ladder and either a gasketed or welded cap on the top of the slotted leg. Each option also includes the requirement to have a gasketed sliding deck cover. These controls are similar to the controls for slotted guidepoles, and they have been accepted in equivalency determinations for numerous storage vessels that are subject to current rules. Thus, the costs to comply with proposed subpart I would be the same as costs to comply with current rules.

Delayed compliance date for deck fitting requirements. The Generic MACT for Tanks Level 2 specifies in 40 CFR 63.1063(a)(2)(ix) that deck fitting requirements do not apply for an existing IFR or EFR until the next time the storage vessel is completely emptied and degassed or 10 years after the promulgation date of the referencing subpart, whichever occurs first. We have not included this provision in proposed subpart I for the same reason described above regarding a similar provision for rim seals (i.e., all existing storage tanks that may in the future be subject to rules that reference the Uniform Standards should have already complied with the deck fitting requirements before they become subject to the Uniform Standards).

Operational requirements. The Generic MACT for Tanks Level 2 requires that the floating roof float on the stored liquid surface at all times, except for times when the floating roof is supported by its leg supports or other support devices such as hangers from the fixed roof (''landings''). Once the floating roof lands, ''the process of filling to the point of refloating the floating roof shall be continuous and shall be performed as soon as practical'' (40 CFR 63.1063(b)(2)), and you must keep records of the date the roof landed and the date it was refloated (40 CFR 63.1065(c)). The language at 40 CFR 63.1063(b)(2) is similar to the language in the CAR (40 CFR 65.43(b) and 65.44(b)), and the preamble to the CAR has clarified that the intent of this language is ''to prevent the liquid level [in the storage vessel] from rising and falling while the roof is resting on the supports'' (63 FR 57768, October 28, 1998). However, neither the Generic MACT for Tanks Level 2 nor the CAR place any limits on the number of landings or the amount of time that a floating roof may be landed. The lack of limits is a concern because the standing idle emissions can be significant, especially relative to the emissions and emissions reductions for deck fittings while the roof is floating. For example, Table 6 of this preamble presents estimated emissions from typical gasoline storage tanks equipped with an EFR and standing idle for 2 or 5 days. These emissions were estimated using AP–42 procedures for a storage vessel in Corpus Christi, Texas. The landed height of the roof was assumed to be 5 feet above the floor of the storage vessel, and the liquid level was assumed to be 0.75 feet above the floor of the storage vessel.

TABLE 6—ESTIMATED STANDING IDLE EMISSIONS FROM GASOLINE STORAGE VESSELS THAT ARE EQUIPPED WITH AN EFR

Size of storage vessel (gal)	Stored contents	Number of days standing idle	Estimated standing idle emissions (lb)
2,000,000	gasoline	2	830
		5	2,100
7,000,000	gasoline	2	1,500
		5	3,900

Other rules (e.g., NSPS Kb) allow floating roof landings only if the storage vessel is being completely emptied, and both the emptying and refilling processes must be continuous and as rapid as possible. This requirement has been interpreted as requiring the storage vessel to be emptied each time the floating roof lands. However, as we clarified in the preamble to the CAR (63 FR 57768), emptying the storage vessel every time the roof lands is undesirable because it increases the vapor space, which in turn increases emissions. Thus, emptying the storage vessel when landings are inadvertent or other times when emptying is not needed for operational reasons is counterproductive.

To minimize emissions from landings and clarify the requirements, we are proposing several differences relative to the requirements in current rules. For example, instead of requiring the floating roof to be floating on the liquid surface at all times except when it is landed on its supports, we are proposing to list specific situations under which the floating roof is not required to be floating on the stored liquid (proposed 40 CFR 65.315(b)(1)). We are proposing to allow the roof to be landed during the

initial fill because the landed height is typically several feet above the floor of the storage vessel. We are not proposing to require control of emissions in displaced gases during the initial fill because the average concentration of regulated materials in the vapor space over the course of the fill is relatively low, and the costs to vent such emissions to a control device are not reasonable. Like current rules, however, the proposed rule typically would require filling to the point of refloating the roof to be conducted continuously and as rapidly as practicable to minimize the amount of time a vapor space is present below the floating roof. The only exception to the proposed requirement for continuous filling until the roof is refloated would be for storage vessels that are used to store product from batch processes. The exemption would apply if the quantity of product from one batch is insufficient to refloat the roof, but sufficient product from additional batches to refloat the roof will be added before any material is withdrawn from the storage vessel.

We also recognize that landings are required in order to take the storage vessel out of service, and they are often required in order to perform inspections, maintenance or before filling the storage vessel with a liquid that is incompatible with the liquid currently stored in the storage vessel. Therefore, we are proposing to allow roof landings in these situations, provided the time spent standing idle is limited to no more than 24 hours. After 24 hours, you would be required to either begin actions to completely empty (and clean, if necessary) or refill the storage vessel. These requirements clarify that you would not be required to empty a storage vessel when the storage vessel does not need to be empty in order to conduct maintenance or inspections. The limited number of situations when landings are allowed is intended to eliminate unnecessary or convenience landings, and the 24-hour limit is intended to prevent emissions from unnecessary time spent standing idle. We request comment on the suitability of the 24-hour limit. In particular, we request comment on specific situations where a storage vessel does not need to be completely emptied to perform maintenance or inspection, but the maintenance or inspection activity cannot be completed in less than 24 hours. We also request comment on the proposed list of circumstances under which floating roof landings would be allowed, in particular whether there are other circumstances that would require a floating roof landing or whether the list allows landings in situations where they are unnecessary.

We are also proposing to allow landings if you elect to route emissions through a closed vent system to a control device that reduces emissions by at least 90 percent while the roof is landed because this control technique will also reduce standing loss emissions relative to uncontrolled landings. To prevent liquid from being drawn into the closed vent system, control would be required only when the liquid fills less than 90 percent of the volume under the landed roof. We are not proposing to require control of displaced emissions during refill after these events because the cost to control, considering the estimated emissions reduction, would not be reasonable except for very large storage vessels that store highly volatile material. We request comment on the technical feasibility and cost of this control option. In particular, we are interested in test data showing the gas flow rate and inlet mass emissions to a control device that was used as we proposed; please also provide related supporting information, such as the diameter of the storage vessel, the height of the landed roof, the average height of the liquid, the type of material stored and the pressure drop across the floating roof. We also request comment on whether the rule should limit the number of days operating in this manner so that the total controlled emissions do not exceed the standing idle emissions from one day. We also request comment on whether any facilities would have no choice but to comply with this control option because it would not be possible to limit landings to the situations described in the paragraph above; please provide a description of any such facilities and explain why limiting landings would not be possible.

Proposed subpart I would require you to estimate regulated material standing idle emissions from each landing and to submit the results in your next periodic report. As in the Generic MACT for Tanks Level 2, you would also be required to keep records documenting the start and end times of all roof landing events. We have determined that maintaining information on the occurrence, time span and quantity of standing idle emissions for landings is needed to demonstrate compliance with the proposed limits on when landings are allowed. This information will also help inform decisions about where to target compliance inspections. We request comment on the feasibility and burden of estimating emissions from landings.

Monitoring and alarm systems. Under the proposed rule, an inadvertent landing of a floating roof would be a deviation of the operating requirements described above. To minimize the number of unintended landings of floating roofs (and the additional emissions generated as a result), we are proposing to require that you equip each affected storage vessel with a system that provides a visual or audible signal when the floating roof is about to land on its legs (or other support devices). This monitoring is intended to alert you in time to take action to prevent an inadvertent landing and the resulting deviation. We are soliciting comment on the prevalence of such monitoring systems in use with existing storage vessels and the burden to add them to storage vessels that are not already so equipped. We estimated the cost to plan, purchase and install the required monitors to be about $2,000 per storage vessel. We estimated the annual costs, including costs to estimate emissions for each landing and related recordkeeping and reporting, to be about $900/year per storage vessel. These estimates assume each floating roof will be landed an average of two times per year, and that one of the landings will be inadvertent.

IFR and EFR inspections. The proposed inspection requirements are consistent with the inspection requirements in 40 CFR 63.1063(c) and (d), except for the six proposed changes discussed below. First, in an effort to improve clarity, we are proposing to tabulate many of the inspection and frequency requirements (see Tables 2 and 3 in proposed subpart I). The intent is not to change the requirements except as discussed below.

Second, we are proposing to specify how an inspector is to demonstrate when a gap constitutes an inspection failure for a deck fitting. The Generic MACT for Tanks Level 2 specifies at 40 CFR 63.1063(d)(1)(v) that a gap of more than ⅛ inch between any deck fitting gasket, seal or wiper, and the surface that it is intended to seal is an inspection failure. The Generic MACT for Tanks Level 2 does not, however, explicitly specify how an inspector is to determine whether gaps exceed this amount. Therefore, we are proposing to specify in proposed 40 CFR 65.315(c)(2)(i) that an inspector must use a ⅛-inch diameter probe, and each location where the probe passes freely constitutes a gap. This procedure is consistent with the currently specified procedure for monitoring rim seal gaps in EFR tanks.

Third, we are proposing an editorial change to the language from 40 CFR 63.1063(d)(1)(v) that is incorporated in

40 CFR 65.315(c)(2)(i). In the Generic MACT for Tanks Level 2, 40 CFR 63.1063(d)(1)(v) specifies that the gap limit for deck fittings applies to ''any deck fitting gasket, seal, or wiper.'' The use of the word ''seal'' in this sentence may be misinterpreted as meaning the provision applies to rim seals because the design requirements for deck fittings refer only to gaskets and wipers. Therefore, to eliminate confusion and improve clarity, we are proposing in 40 CFR 65.315(c)(2)(i) to specify that the gap limit applies to each deck fitting gasket or wiper.

Fourth, to increase compliance flexibility and possibly emissions reductions, we are proposing to allow optical gas imaging or monitoring using Method 21 of
40 CFR part 60, appendix A–7 as an alternative to measuring rim seal gaps for EFR and deck fitting gaps for both IFR and EFR. The monitoring would be required on the same schedule as the otherwise applicable gap measurement requirements. An inspection failure would occur if you obtain an instrument reading greater than 500 ppmv when monitoring using Method 21 of 40 CFR part 60, appendix A–7, or when you obtain an image of emissions when using optical gas imaging. Conditions causing an inspection failure would have to be repaired. To ensure consistent and reliable results when using optical gas imaging, we are also proposing two additional requirements: (1) Optical gas imaging would be allowed only if at least one compound in the emissions from the storage vessel can be detected by the optical gas imaging instrument and (2) monitoring would be required in accordance with a new protocol for optical gas imaging. As discussed in sections III.A.3 and III.A.4 of this preamble, we are currently developing a protocol for using optical gas imaging instruments, and we expect that the protocol will be proposed as appendix K in 40 CFR part 60. We anticipate that compliance with either of the proposed monitoring alternatives would result in lower emissions than compliance with the conventional gap measurement requirements because agency personnel using an optical gas imaging instrument have often seen images of emissions from seals and fittings that appear to be in good condition upon visual inspection (see the memorandum titled *Leaks Observed from Fixed Roof and Floating Roof Fittings,* in the docket for proposed subpart I). We have not estimated cost effectiveness to conduct optical gas imaging or monitoring using Method 21 of 40 CFR part 60, appendix A–7, because such monitoring is only an alternative to gap measurements, not a requirement. However, monitoring costs and burden for optical gas imaging may be lower if several fittings can be monitored simultaneously. We request comment on the technical feasibility, performance and costs of both proposed alternatives to gap measurement requirements.

Fifth, we are proposing to require inspections of an EFR deck and fittings annually rather than at least every 10 years, as specified in the Generic MACT for Tanks Level 2. The Generic MACT for Tanks Level 2 requires annual secondary seal gap measurements, but complete inspections of the EFR, rim seals and deck fittings are required only when the storage vessel is completely emptied and degassed, or every 10 years, whichever occurs first. A commenter on the proposed changes to storage vessel requirements in 40 CFR part 63, subpart CC (73 FR 66694, November 10, 2008), which would have referenced the Generic MACT for Tanks Level 2, stated that the annual inspection for EFR should be expanded to include inspection of the roof and deck fittings as well as the secondary seal because defects in the roof or fittings are often clearly visible during the secondary seal inspections (see Docket Item No. EPA–HQ–OAR–2003–0146–0176). Furthermore, the commenter noted that, under the current rule, it is unclear whether any such defects noted during the annual inspection are to be repaired, reported or ignored until the next complete inspection. Upon review, we have determined that annual inspections of the EFR deck and fittings are reasonable because: (1) An inspection for other failures can readily be accomplished each time an inspector is measuring secondary seal gaps; (2) conducting such failure inspections annually would more closely align the EFR inspection requirements with the current IFR inspection requirements; and (3) we estimated the additional burden and costs to be minimal. Measurement of gaps between deck fitting gaskets and the surfaces they are intended to seal is not required for IFR. However, given that EFR have a greater potential for emissions due to wind effects, we think the minimal additional time and cost to perform such measurements of EFR fittings is reasonable in light of the potential for reduced emissions. We estimated the additional labor costs for visual inspections, measurement of deck fitting gasket gaps and associated recordkeeping to be about $100/year. The additional burden was estimated to be about 2 hours per storage vessel.

As noted above, we are proposing to allow monitoring using Method 21 of 40 CFR part 60, appendix A–7 and optical gas imaging as alternatives to gap measurement requirements. We estimated the costs and burden to conduct annual monitoring of EFR deck fittings using Method 21 of 40 CFR part 60, appendix A–7 to be about the same as for annual to measurement of gaps at each fitting because an inspector has to check each fitting individually in both cases. Theoretically, costs and burden to conduct optical gas imaging could be slightly less (assuming the facility is using a camera that has already been purchased for monitoring equipment leaks) because several emission points can be monitored simultaneously with an optical gas imaging instrument, but we assumed the same amount of time because time is needed to prepare the camera and to obtain images from multiple locations. See the memorandum titled *Survey of Control Technology for Storage Vessels and Analysis of Impacts for Storage Vessel Control Options,* in the docket for proposed subpart I for additional discussion of how these costs and burden estimates were developed. We request comments that assess the effectiveness and burden of the proposed annual EFR inspections relative to the inspection requirements in the Generic MACT for Tanks Level 2.

We are also proposing to clarify that repair is required any time a condition that constitutes an inspection failure is noted, regardless of whether it was noted as part of a scheduled inspection. Although not stated explicitly, current rules imply that repair is required any time an inspection failure is noted because they state that inspections must be conducted at least once during a specified time period. Any time a condition that constitutes an inspection failure is noted is effectively an inspection, whether or not it was scheduled.

Finally, we are proposing changes to clarify the required frequency of inspections because we received comments on proposed amendments to 40 CFR part 63, subpart CC, that the current requirements could be subject to different interpretations (see docket item EPA–HQ–OAR–2003–0146–0176). For example, the requirement to conduct inspections ''every 10 years'' could mean in every tenth calendar year, no later than the date 10 years after the previous inspection or in the same month every 10 years. The same uncertainties also apply to the inspection requirements that must be

conducted once per year or every 5 years. We have also been asked when the inspection must be conducted if the storage vessel is out of service on the date when the inspection must be completed. To address these questions, we are proposing to replace the requirements for inspections at least once per year with a requirement to conduct inspections at least annually. The proposed General Provisions in 40 CFR part 65, subpart H specify that ''annually'' means once per calendar year, and successive occurrences of such events must be separated by at least 120 days. For the inspections that are required at least every 5 years and every 10 years under the Generic MACT for Tanks Level 2, we are proposing to require that the inspection typically must be conducted before the date 5 years (or 10 years) after the last inspection. The only exception is that an inspection may be delayed if the storage vessel is out of service on that date, but in such cases, the inspection must be conducted before the storage vessel is refilled.

Repairs. The proposed requirements to repair conditions that caused inspection failures are similar to the requirements at 40 CFR 63.1063(e) in the Generic MACT for Tanks Level 2. We are proposing three changes to clarify the requirements. As discussed above, the first change clarifies that all conditions that cause an inspection failure, regardless of whether they were identified during a scheduled inspection, must be repaired.

The second change would clarify terminology. The applicable repair requirements in 40 CFR 63.1063(e) differ depending on whether or not the inspection was conducted while the storage vessel was storing liquid. These requirements could be subject to inconsistent interpretations because the term ''storing liquid'' is not defined in the rule. The intent of the language was to apply different procedures depending on whether or not the storage vessel was completely empty when the inspection was conducted. The term ''completely empty'' is defined in the rule. Therefore, rather than define ''storing liquid,'' we are proposing to replace that term with the term ''completely empty'' to clarify the requirements.

The third change would clarify the recordkeeping requirements when you use an extension to delay repair or emptying of a storage vessel beyond 45 days. The current requirements in 40 CFR 63.1063(e) imply that documentation of extensions is to be prepared before you use an extension and could be misinterpreted as requiring a request for approval to use an extension. Section 63.1067 of the Generic MACT for Tanks Level 2 also specifies that this documentation be submitted in periodic reports. We have determined that approvals are not necessary; records that document the type of failure, the reasons why an extension was needed, the steps taken to either repair or completely empty the storage vessel during the extension and the date on which repairs were completed or the storage vessel was completely emptied are sufficient to demonstrate compliance. Furthermore, requesting approval via a periodic report is impractical because the schedule of such reports is unlikely to coincide with many extension periods. Therefore, to clarify the reporting requirements, the language in the proposed rule differs from the Generic MACT for Tanks Level 2 in that it clearly requires records of each decision to use an extension.

5. How did the EPA determine the proposed requirements for vapor balancing as a compliance approach for atmospheric storage vessels?

We are proposing that the second approach for atmospheric storage vessels is vapor balancing (proposed 40 CFR 65.320). Proposed subpart I would require the same design, operating, monitoring and repair requirements for the fixed roof and closure devices that would be required for the closed vent system approach. See section III.B.6 of this preamble for a discussion of our rationale for these requirements. The vapor balancing requirements that we are proposing are similar to requirements in several rules in 40 CFR part 63 (e.g., the MON), except for the following three changes. First, we are proposing to replace the requirement to conduct quarterly monitoring of pressure relief valves on storage vessels using Method 21 of 40 CFR part 60, appendix A–7, with a requirement to conduct applicable LDAR requirements for all equipment in the vapor balancing system. The proposed requirements are nearly identical to the proposed requirements for closed vent systems, as described in section III.B.6 of this preamble. The only difference is that you would have the option to reduce instrument monitoring frequencies (for types of equipment that must be monitored) consistent with the alternative for equipment in batch operations in proposed 40 CFR part 65, subpart J. We proposed this difference because it would be possible to determine the total operating hours for a vapor balancing system, but not for a closed vent system. We are not proposing to limit the monitoring requirement to PRD because such monitoring provides information only for that one piece of equipment. Conducting monitoring of the entire vapor balancing system while the storage vessel is being filled provides more information about the integrity of the entire system, and it is information collected while the system is actually operating and most likely to be emitting vapors.

The second difference from vapor balancing requirements in current rules is that the proposed rule would require design, operation, inspection and repair of openings and closure devices consistent with the requirements for fixed roofs in storage vessels that are controlled by routing emissions through a closed vent system to a control device, as described in section III.B.6 of this preamble. Although current rules and proposed subpart I require PRD be set at levels to prevent breathing losses, we determined that additional requirements are needed to minimize vapor leakage through the roof and fittings regardless of the method for controlling breathing and working losses.

The third difference from vapor balancing requirements in current rules is that the proposed rule would specify no requirements for offsite facilities that reload (and in some cases clean) the transport vehicle or barge. In current rules, these facilities are subject to the same control requirements as the facility that has the affected storage vessel. Both the vapor balancing and closed vent system options were included in current rules in 40 CFR part 63 because they were determined to be at least as effective as using floating roofs, which represented the MACT floors. Based on recent analyses, we determined that requiring control of offsite facilities as part of a vapor balancing option results in better overall control than the other options. Furthermore, the total emissions from a regulated source implementing vapor balancing and an uncontrolled offsite cleaning/reloading facility typically are about the same as the total emissions from both facilities when the regulated source implements the closed vent system approach. The performance of the closed vent system approach relative to vapor balancing will vary depending on the saturation level of the vapor space in the transport vehicle or barge when unloading of liquid to the storage vessel is complete. If the organic compound concentration in the vapor space of the transport vehicle or barge when transfer is complete is approximately the same as the concentration in the vapor space of the storage vessel, then the total mass of organic compounds in the transport

vehicle or barge (in both the vapor space and the liquid heel) would be the same under both approaches. Under these conditions, the performance of the two approaches is essentially the same, and control at the offsite cleaning/reloading facility as part of the vapor balancing approach is not needed to achieve the same level of control as the closed vent system approach. See the memorandum titled *Vapor Balancing Emissions Estimates for Storage Vessels,* in the docket for proposed subpart I for example calculations.

Another issue with the vapor balancing approach, as specified in current rules, is that it imposes a significant burden on the offsite facilities (assuming these facilities are not required to control transfer operations emissions under a rule that currently applies to their source category). Furthermore, because facilities outside the United States are not required to comply with this rule, a regulated source would not be allowed to use the vapor balancing approach if the transport vehicle is cleaned outside of the United States. Therefore, we have decided not to include control requirements for offsite facilities in proposed subpart I because we have determined that such requirements result in greater overall emissions reductions than other storage vessel control approaches. This additional control is not needed to meet regulatory requirements such as MACT in current rules because the performance of vapor balancing without offsite control is at least equivalent to the performance of other control approaches, including those that represent MACT in current rules. As a result, the offsite control requirement also imposes an unnecessary burden on the offsite facilities. Furthermore, the vapor balancing approach without offsite controls imposes clearly enforceable requirements on the regulated facility. We request comment on the differences between the proposed vapor balancing requirements and the vapor balancing requirements in current rules. In particular, we are interested in whether the proposed lack of requirements for offsite facilities could result in significantly higher total emissions under some conditions. We are also interested in test data or theoretical calculations of the organic compound saturation level or concentration in the vapor space of freely vented transport vehicles at the time when unloading of various liquids is complete.

6. How did the EPA determine the proposed requirements for control of atmospheric storage vessels when routing emissions through a closed vent system to a control device?

As discussed in section III.A.5 of this preamble, the proposed requirements are based on a combination of the procedures specified in 40 CFR part 65, subpart M and several additional requirements. As discussed in section V.B of this preamble, we have structured the proposed requirements in subpart M to be applicable to any emissions stream that is controlled by routing through a closed vent system to a control device. Referencing these provisions from proposed subpart I promotes consistency for all emissions streams that are routed through a closed vent system to a control device. It is also intended to simplify and reduce the burden of compliance and reduce the potential for inadvertent errors. However, we are also proposing several additional requirements to ensure appropriate control for storage vessels.

In addition to the proposed requirements in 40 CFR part 65, subpart M, we are proposing to require design and operation of the fixed roof and closure devices consistent with the proposed requirements for fixed roof storage vessels, as discussed in section III.B.3 of this preamble, except that breathing and working losses would have to be controlled rather than vented to the atmosphere. We are also proposing to require the same type of monitoring and repair of all potential sources of vapor leakage from the fixed roof and closure devices, as discussed in section III.B.3 of this preamble. We request comment on whether the proposed monitoring frequencies are reasonable and if any changes to operating procedures for the monitoring devices would ensure that the alternative monitoring methods provide similar results.

For equipment in a closed vent system, proposed 40 CFR part 65, subpart M references the compliance requirements in proposed 40 CFR part 65, subpart J. However, in subpart I we are proposing to reference only the bypass line requirements in proposed subpart M and reference directly the applicable equipment leak requirements in proposed subpart J. We selected this approach to specify more easily that certain options in proposed subpart J do not apply to equipment in a closed vent system that conveys emissions from a regulated storage vessel. Specifically, the alternative monitoring frequency requirements for equipment in batch operations would not be allowed for equipment in such closed vent systems because the closed vent system must be in service continuously. Similarly, the provision that specifies sensory monitoring for equipment in service less than 300 hr/yr would not be allowed for equipment in such closed vent systems because determining the amount of time the system actually is conveying emissions is not practical.

The applicable requirements in 40 CFR part 65, subpart J differ depending on whether the equipment is in regulated material service or if it contains or contacts fluid that contains regulated material at levels below the regulated material service threshold. Current rules typically require sensory monitoring of closed vent systems (only closed vent systems constructed of ductwork are subject to monitoring using Method 21 of 40 CFR part 60, appendix A–7). We are proposing instrument monitoring of closed vent systems in regulated material service to be consistent with the requirements for process lines that convey gaseous materials and to ensure that the emission streams reach the control device so that the required level of control is met. As an alternative to using Method 21 of 40 CFR part 60, appendix A–7, we are proposing to allow monitoring using an optical gas imaging device (after the protocol is promulgated, as discussed in section III.A.3 of this preamble), provided at least one compound in the emissions can be detected by the optical gas imaging instrument.

The proposed rule also specifies that all equipment in sections of closed vent systems that convey emissions from storage vessels that meet the thresholds for control (i.e., the thresholds specified in Table 1 of this preamble) are in regulated material service; no additional determination of the composition of gas streams in the closed vent system is required. This approach is being proposed because it provides an easy way for determining when equipment is in regulated material service and because the concentration of organic compounds in vapor that is in equilibrium with a liquid that has a vapor pressure of 0.75 psia (the minimum threshold for control) is approximately 50,000 ppmv, which after conversion to a weight basis, is comparable to or lower than typical 5 percent or 10 percent by weight thresholds in definitions of ''in organic HAP service'' or ''in VOC service'' in current rules. We request comment on other approaches that can accurately determine whether equipment is in regulated material service without imposing unreasonable burden.

Current rules for storage vessels generally require non-flare control devices to reduce organic compound emissions by at least 95 percent or to an outlet concentration of regulated material less than 20 ppmv. They also require at least a 99-percent reduction or outlet concentration less than 20 ppmv for acid gases or halogen atoms (the acid gases may be part of the emission stream directly from the storage vessel, or they may be generated by burning halogenated organic compounds in combustion control devices). These levels are achievable by storage vessels storing a wide range of materials in a wide range of source categories, and they are at least equivalent to the reductions that are achieved when using floating roofs. Thus, we are proposing to specify these required control levels in proposed subpart I rather than in each of the individual referencing subparts, thereby improving consistency and simplifying the referencing subparts. The use of flares to control organic emissions from storage vessels is another option that would be allowed in proposed subpart I; all requirements for flares are covered in 40 CFR 63.11(b) of subpart A.

Proposed 40 CFR part 65, subpart M specifies that control performance requirements will be specified in referencing subparts. Because proposed subpart I specifies the required reductions or outlet concentrations for non-flare control devices used to control emissions from storage vessels, subpart I (rather than the rule that references subpart I) would be the referencing subpart for the purpose of complying with proposed subpart M. Therefore, subpart I must specify the provisions for initial compliance determinations (*i.e.,* design evaluation or performance test), if applicable for storage vessels. We determined that design evaluations provide sufficiently accurate results for demonstrating compliance with the reductions required for storage vessels. Thus, we are proposing to specify in subpart I that initial compliance with requirements for non-flare control devices that control emissions from storage vessels may be demonstrated using a design evaluation instead of a performance test, which is the default in subpart M. However, any control devices that control other emissions (*e.g.,* process vents) in addition to storage vessel emissions, may still be required to conduct a performance test instead of a design evaluation, if another subpart references subpart M for the same control device.

As in current rules, we are proposing to require different standards for periods of planned routine maintenance of the control device. We are not proposing to require compliance with the same standard at all times because the cost of such a requirement would be unreasonable. Instead, we are proposing to prohibit the addition of material to the storage vessel during periods of planned routine maintenance and to limit the time of planned routine maintenance to less than 360 hr/yr. If you need more than 240 hr/yr, you would be required to keep a record documenting why 240 hours is insufficient and the steps you took to minimize the additional time for planned routine maintenance. In analyses for current rules, 240 hours has been determined as sufficient for most control device rebuilds.

7. How did the EPA determine the proposed requirements for control of atmospheric storage vessels when routing emissions to a fuel gas system?

For fuel gas systems that control emissions from storage vessels, proposed subpart I references the fuel gas system requirements in proposed 40 CFR part 65, subpart M and specifies a few additional requirements to ensure appropriate control for storage vessels. See section V.B.4 of this preamble for a discussion of the requirements in subpart M for fuel gas systems. Proposed subpart I also would require the same design operating, monitoring and repair requirements for the fixed roof and closure devices that would be required for the closed vent system approach. See section III.B.6 of this preamble for a discussion of our rationale for these requirements. Proposed subpart I also would require compliance with proposed 40 CFR part 65, subpart J for the equipment in the fuel gas system. As for the closed vent system approach, all equipment in sections of a fuel gas system that convey emissions from an affected storage vessel are in regulated material service and subject to the monitoring and other LDAR requirements for equipment in regulated material service. See section III.B.6 of this preamble for a discussion of the rationale for these requirements.

8. How did the EPA determine the proposed requirements for control for pressure vessels?

A pressure vessel is defined in the Uniform Standards as a storage vessel that is designed not to vent to the atmosphere as a result of compression of the vapor headspace in the vessel during filling of the vessel. We are proposing standards for all pressure vessels that contain any regulated material. We are not proposing thresholds for the following reasons. First, materials stored in a pressure vessel are likely to be highly volatile; thus, a low vapor pressure threshold would have little or no impact. Second, we do not expect the operating pressure or frequency of leaks to vary with the size of the storage vessel. Thus, the emissions for the same emission pathway would be the same regardless of the size of the storage vessel. Third, the fittings on the pressure vessel are comparable to the types of equipment (and in the same service as equipment) that would be subject to monitoring under proposed 40 CFR part 65, subpart J.

The proposed requirements for pressure vessels are to equip each opening with a closure device, operate without emissions to the atmosphere at any time, monitor annually all potential leak interfaces using Method 21 of 40 CFR part 60, appendix A–7 (or semiannually when using optical gas imaging), estimate and report emissions from periods when instrument readings exceed 500 ppmv or an image is detected and route purge streams to a control device. Closure devices are an operational necessity for pressure vessels, and they prevent emissions as well. We are proposing periodic monitoring requirements as a means to demonstrate compliance with the requirement to operate without emissions to the atmosphere. We have determined that estimating and reporting emissions is needed to help inform decisions about where to target compliance inspections and to ensure that the pressure vessels are properly operating with no vents to the atmosphere. The burden to conduct monitoring and associated recordkeeping and reporting is estimated to be about 2 hr/yr per storage vessel, at a cost of about $170/year for monitoring with Method 21 of 40 CFR part 60, appendix A–7. The burden is estimated to be about 3.5 hr/yr at a cost of about $260/year for monitoring with an optical gas imaging instrument. The differences in the proposed Uniform Standards are due primarily to the different monitoring frequencies.

We are proposing to include an alternative to the requirement of maintaining a closed system at all times. This alternative would allow you to purge inert materials that build up in the pressure vessel, provided the purge stream is routed through a closed vent system to a control device that achieves the same performance that is being proposed for atmospheric storage vessels (*i.e.,* reductions of at least 95 percent or to less than 20 ppmv or routed to a flare that meets the requirements in 40 CFR 63.11(b)). This

provision is consistent with an option for controlling emissions from pressure vessels that manage hazardous waste and are subject to the Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities in 40 CFR 264.1084 and 40 CFR 265.1085. We are proposing this option in subpart I because it is consistent with and ensures control comparable to proposed requirements for atmospheric storage vessels.

9. How did the EPA determine the proposed requirements for overfill detection and alarms?

We are proposing to require you to equip each storage vessel with an overfill detection sensor. A consortium of international oil companies conducted a study that concluded 11 percent of sunken-roof accidents were caused by overfilling the storage vessel (see *2008 American Petroleum Institute (API) AST Conference,* in the docket for proposed subpart I). According to instrumentation industry representatives, overfill detection systems are currently available, and storage vessels designed to American Society of Mechanical Engineers (ASME) standards must be equipped with such monitoring and alarm systems. The proposed overfill monitoring requirement is intended to alert you to a potential overfill so that you can take action to prevent the overfill and, thus, avoid a deviation of design requirements. We estimated the average cost to plan, purchase and install the required monitor and alarm to be about $1,900 per storage vessel. We estimated the average annual cost of the proposed requirement, including recordkeeping and reporting, to be about $400/year per storage vessel. We expect that this requirement will add little burden because we understand that most storage vessels are already equipped with overfill monitoring and alarm systems. Therefore, we request comment with descriptions of any types of affected storage vessels that are not already equipped with overfill protection systems. We also request comment on whether additional design or operational requirements are needed to ensure successful implementation and enforcement of the proposed overfill monitoring requirement, and whether other types of monitoring could better prevent overfill and the resulting emissions.

10. How did the EPA determine the proposed requirements for control of transfer operations to load transport vehicles?

In the survey of technology for control of transfer operations that involve loading transport vehicles, we identified several compliance approaches. The most common is submerged loading (or bottom loading). We identified this compliance approach as Control Option TR1. We also identified four additional compliance approaches that are more effective than submerged loading alone: (1) Control Option TR2 is to route displaced emissions through a closed vent system to a flare; (2) Control Option TR3 is to route displaced emissions through a closed vent system to a control device that reduces regulated organic emissions by at least 98 percent or to less than 20 ppmv; (3) Control Option TR4 is to vapor balance the displaced emissions back to the storage vessel from which the transport vehicle is being loaded; and (4) Control Option TR5 is to route displaced emissions to a fuel gas system.

We estimated impacts only for Control Options TR1 and TR2. We did not estimate impacts for the other compliance approaches for several reasons. We did not estimate costs for Control Option TR3 because, as part of the analysis for the OLD NESHAP, we determined that flares are the most common and least costly control device for transfer racks. See the memorandum titled *Environmental and Cost Impacts of the Proposed OLD NESHAP,* in docket item EPA–HQ–OAR–2003–0138–0053 for the flare analysis. Although vapor balancing may be less costly than control using a flare in some cases, we did not estimate impacts for Control Option TR4 because vapor balancing requires no venting from the system while a transfer is occurring. This will require pressure settings in the system that may not be feasible for some atmospheric storage vessels. We also did not estimate impacts for Control Option TR5 because not all facilities have or could make use of a fuel gas system, and it would be impractical to install a fuel gas system to handle transfer emissions alone.

Regardless of the control option, vapor tightness testing of the transport vehicle is an approach for ensuring that emissions are conveyed to the intended destination. Finally, LDAR for the equipment in the transfer rack is an approach for controlling fugitive emissions from the transfer rack itself. Each of the control options and other compliance approaches and how they have been incorporated into proposed subpart I are discussed in the sections below.

Control Option TR1. According to AP–42 Chapter 5.2, splash loading results in a vapor-space saturation factor of 1.45, and submerged loading results in a saturation factor of 0.6. Reducing the saturation factor also reduces the concentration of organic compounds in the gases that are displaced when loading the transport vehicle. Thus, Control Option TR1 reduces transfer emissions by an estimated 60 percent relative to splash loading. As shown in Table 7 of this preamble, the costs for Control Option TR1 in light of the estimated emissions reductions also are reasonable for a wide range of transfer throughputs and average vapor pressures. In many cases, the switch to submerged loading would result in a cost savings. Thus, we are proposing that all transfers of regulated material to transport vehicles be conducted using submerged (or bottom) loading.

TABLE 7—ESTIMATED IMPACTS FOR SUBMERGED LOADING OF TRANSPORT VEHICLES

[Control option TR1]

Average vapor pressure of transferred material (psia)	Total transfer throughput at facility (million gal/yr)	Number of loading arms	Total annual costs ($/yr)	Emission reduction [a] (tpy)	Incremental cost effectiveness [a] ($/ton)
0.08	2	1	710	0.13	5,400
0.08	21	4	2,100	1.4	1,500
0.08	45	12	7,300	2.9	2,500
1	2	1	190	1.6	100
1	21	4	(12,100)	17	(710)
1	45	6	(28,000)	37	(770)
3	2	2	(2,700)	4.9	(560)
3	21	4	(43,000)	51	(840)

TABLE 7—ESTIMATED IMPACTS FOR SUBMERGED LOADING OF TRANSPORT VEHICLES—Continued

[Control option TR1]

Average vapor pressure of transferred material (psia)	Total transfer throughput at facility (million gal/yr)	Number of loading arms	Total annual costs ($/yr)	Emission reduction [a] (tpy)	Incremental cost effectiveness [a] ($/ton)
3	45	6	(94,000)	110	(860)

[a] Relative to uncontrolled (*i.e.,* splash loading).

The emissions estimates for the model facilities in Table 7 of this preamble were estimated using procedures in AP–42 Chapter 5.2, assuming the average transfer temperature is 60 °Farenheit and the average vapor molecular weight of transferred materials is 80. The total capital investment was scaled from a quote for converting a rack that has six arms from splash loading to submerged loading; this quote was provided by an industry trade association during development of the gasoline distribution area source rule (see docket item EPA–HQ–OAR–2006–0406–0060). Annual costs were developed for operation, maintenance and indirect costs such as capital recovery. We also included a product recovery credit for the emissions prevented by the change in loading procedures. See the memorandum titled *Survey of Control Technology for Transfer Operations and Analysis of Impacts for Transfer Operation Control Options,* in the docket for proposed subpart I for additional information regarding the development of these impacts.

Control Option TR2. In the impacts analysis for Control Option TR2, we evaluated the impacts for model facilities similar to those that we used in the analysis of submerged loading impacts. The resulting annual costs, emission reductions and incremental cost effectiveness relative to Control Option TR1 are shown in Table 8 of this preamble. See the memorandum titled *Survey of Control Technology for Transfer Operations and Analysis of Impacts for Transfer Operation Control Options,* in the docket for proposed subpart I for a more detailed discussion of how the impacts were developed.

TABLE 8—ESTIMATED IMPACTS TO CONTROL EMISSIONS FROM LOADING OF TRANSPORT VEHICLES USING A CLOSED VENT SYSTEM AND FLARE

[Control option TR2]

Total transfer throughput at facility (million gal/yr)	Average vapor pressure of transferred material (psia)	Number of loading arms	Total annual costs ($/yr)	Emission reduction [a] (tpy)	Incremental cost effectiveness [a] ($/ton)
15	1	6	94,000	8.5	11,100
	3	2	79,000	25.4	3,100
	6	6	94,000	50.7	1,900
25	1	10	116,000	14.1	8,200
	3	8	104,000	42.3	2,500
	6	8	104,000	84.5	1,200
45	1	6	94,000	25.4	3,700
	3	6	94,000	76.1	1,200
	6	12	131,000	152	860

[a] Relative to submerged loading.

Based on the results in Table 8 of this preamble, we determined that the costs of Control Option TR2 are reasonable when a facility transfers more than 35 million gal/yr of liquids that contain regulated material, and the weighted-average vapor pressure of the transferred liquids is a little over 3 psia. Using the monthly temperature data in AP–42 Chapter 7.1 to calculate vapor pressures for several cities shows the average true vapor pressure often is about 80 percent of the MTVP. Thus, we are proposing to require control of displaced emissions from transport vehicle loading at facilities that meet thresholds of at least 35 million gal/yr throughput and a weighted average MTVP of at least 4 psia.

As for storage vessels, some current rules specify thresholds for transfer operation control that are more stringent than the thresholds that we determined to be cost effective. For transfer operations, we decided not to propose any of the thresholds from current rules because few current rules require control of transfer operations, and the thresholds in these rules vary. We also have not conducted regulatory analyses for source categories that do not have control requirements for transfer operations. Therefore, we do not know what thresholds would be appropriate in those rules if they were to be amended to include requirements for transfer operations. At a minimum, the current analysis identifies the cost-effective thresholds that could be used as a starting point in more detailed analysis of requirements on a source category-specific basis.

In contrast to some current rules (*e.g.,* the HON), the proposed vapor pressure threshold is based on the MTVP instead of average vapor pressure. This is intended to reduce the compliance burden. If the temperature of the transferred material varies over the year, then significant calculations and recordkeeping is needed to document the vapor pressure for each transfer and the average over all transfers during the year. The burden grows as the number of materials transferred increases. We recognize that even determining the throughput-weighted MTVP could be burdensome for a rack that transfers numerous regulated materials. It also

requires you to project the total amount of various materials that you expect to transfer during the year so that you can determine whether there is a chance that you would exceed the thresholds. Basing the control threshold only on throughput as in some rules (*e.g.,* the OLD NESHAP) would be less burdensome, but control would be required regardless of the material transferred. Therefore, we request comment on the proposed thresholds for control and suggestions for alternative thresholds that would impose less compliance burden while still ensuring control of emissions when the cost of such control is reasonable.

Other compliance approaches. We are proposing to include several alternative compliance options with which you may elect to comply instead of using a flare. These alternatives are based on Control Options TR3, TR4 and TR5, and they are being included because their performance is the same as or possibly marginally better than the performance obtained by routing emissions through a closed vent system to a flare. We are proposing compliance procedures based on Control Options TR3 and TR5 that are the same as for the closed vent system and fuel gas system approaches for control of storage vessel emissions, except that monitoring or inspections would be required while a transport vehicle is being filled with regulated material. As in the requirements for storage vessels, we are proposing to allow you to demonstrate initial compliance with an emission limit using either a design evaluation or performance test regardless of the throughput. We are proposing this approach to minimize the compliance burden and because we have determined a design evaluation is sufficient given the relatively low level of emissions from transfer operations relative to other emission sources.

The option based on Control Option TR4 is similar to the vapor balancing approach in the OLD NESHAP and other rules in that it includes both design requirements and inspection requirements (*e.g.,* see 40 CFR 63.2346 and Tables 7 and 10 in 40 CFR part 63, subpart EEEE). Unlike current rules, however, we are also proposing to require the following specific design elements and operating procedures: (1) The vapor balancing system must be designed to prevent any regulated material vapors collected at one transfer rack from passing to another transfer rack; (2) all vapor connections in the system must be equipped with closures that seal upon disconnect; and (3) PRD in the system must remain closed while regulated material is loaded in the transport vehicle. Meeting these requirements will help ensure that the vapors displaced from loading transport vehicles with regulated materials are returned to the storage tank from which the liquids being loaded originated. The second and third requirements also are consistent with proposed requirements for vapor balancing systems to control emissions from storage vessels. Finally, we are proposing to require LDAR of equipment in the vapor balancing system consistent with the proposed requirements for equipment in closed vent systems. The vapor balancing system monitoring requirements vary widely in current rules. For example, no monitoring requirement is specified in the MON; the HON requires either annual visual inspections or annual monitoring using Method 21 of 40 CFR part 60, appendix A–7, depending on whether the system is constructed of hard-piping or ductwork; and the OLD NESHAP requires quarterly monitoring using Method 21 of 40 CFR part 60, appendix A–7. We are proposing requirements consistent with those for closed vent systems to streamline the compliance procedures and because a vapor balancing system serves essentially the same purpose as a closed vent system.

Transport vehicle tightness testing. As part of the compliance approaches that are based on Control Options TR2, TR3, TR4 and TR5, you would be required to transfer regulated materials only to transport vehicles that are determined to be vapor tight. We are proposing the vapor tightness requirement for transport vehicles that are loaded at affected transfer racks to ensure that the requirement to collect and convey emissions to control during transfer operations is effective. These requirements have the added benefit of minimizing emissions while the vehicle is in transport as well. To be considered vapor tight, each transport vehicle that is loaded with material that has a MTVP greater than 4 psia would be required to pass an annual vapor tightness test conducted using Method 27 of 40 CFR part 60, appendix A–8. All other transport vehicles would be required to have a current certification in accordance with DOT pressure test requirements in 49 CFR part 180 for cargo tanks or 49 CFR 173.31 for tank cars. These proposed requirements are similar to requirements in several current rules. For example, several gasoline distribution rules require testing of gasoline transport vehicles using Method 27 of 40 CFR part 60, appendix A–8 (*e.g.,* 40 CFR part 60, subpart XX, and 40 CFR part 63, subpart R). The OLD NESHAP requires EPA Method 27 testing for transport vehicles that are equipped with vapor-collection equipment, and other transport vehicles must meet the DOT certification requirements. In the preamble to the proposed OLD NESHAP, we noted that tank trucks in chemical service typically are not equipped with vapor-collection equipment (63 FR 15682, April 2, 2002). Although we are uncertain whether vapor-collection equipment is now more common on trucks used to transport chemicals than it was 10 years ago, we think it is appropriate that all vehicles used to transport materials with vapor pressure comparable to the vapor pressure of gasoline should be subject to the same vapor tightness requirements. The proposed MTVP threshold was set at 4 psia because this is about the minimum MTVP for any grade of gasoline. We request comment on the burden and costs of this proposed requirement to conduct vapor-tightness testing using Method 27 of 40 CFR part 60, appendix A–8. For example, we are interested in estimates of the number of vehicles that would have to be retrofitted with vapor-collection equipment, the costs of such retrofits and the fraction of the volume transported in such vehicles that exceeds the 4-psia threshold. In addition, since the MTVP of a given material varies depending on location, we request comment on whether a threshold based on another parameter would be easier to implement.

Finally, as in current rules, you would be required to take actions to assure that your closed vent system, vapor balancing system or fuel gas system is connected to the transport vehicle's vapor-collection equipment when regulated material is transferred. These requirements are intended to ensure that the displaced emissions are routed to the required control. Examples of actions to satisfy this requirement include training drivers in the hookup procedures and posting visible reminder signs at the affected transfer racks.

11. How did the EPA determine the proposed requirements for control of transfer operations to load containers?

In the survey of technology of emission controls for transfer racks that are used to load containers, we identified several control approaches that have each been included in one or more current rules. For example, one approach is to use controls such as submerged loading or fitted openings in conjunction with transfer line purging. We also identified operational practices to control emissions from containers that are storing transferred regulated

material (*e.g.,* maintaining covers and other closure devices in the closed position except when access to the container is necessary). We also identified three more effective compliance approaches: (1) Vapor balance displaced emissions back to a storage vessel; (2) locate the transfer rack inside an enclosure that meets the requirements for a Permanent or Temporary Total Enclosure in 40 CFR 52.741, appendix B, and exhaust the enclosure through a closed vent system to a control device; and (3) vent displaced emissions from the container itself through a closed vent system to a control device. In addition, vapor tightness testing can be conducted on containers, like transport vehicles.

For the impacts analysis, we evaluated two control options: Control Option TR6, which combines submerged fill with the operational practices of using closure devices on stored containers and Control Option TR7, which consists of venting displaced emissions through a closed vent system to a flare. We did not estimate impacts for the enclosure approach (Control Option TR8) because costs for the enclosure are expected to result in higher total costs than for Control Option TR7, and the control device might have to be larger to handle the airflow needed to meet the requirements in 40 CFR 52.741, appendix B. We did not estimate impacts for the vapor balancing approach (Control Option TR9) because we are not aware of any facility that is using this approach, and as with storage vessels, vapor balancing may not be feasible at all facilities due to allowable pressure limits for safe operation.

The impacts of Control Options TR6 and TR7 for a series of model transfer racks are presented in Table 9 of this preamble. The models cover a range of typical throughputs as reported by facilities that responded to an information collection request (ICR) for OLD operations (see the memorandum titled *Model Plants for the OLD Source Category,* in docket item EPA–HQ–OAR–2003–0138–0052 for site-specific throughputs). The models also span a wide range of average vapor pressures.

TABLE 9—ESTIMATED IMPACTS OF CONTROL OPTIONS TR6 AND TR7 FOR LOADING CONTAINERS AT A TRANSFER RACK

Average Reid vapor pressure of transferred material (psia)	Total transfer throughput at facility (million gal/yr)	Total annual costs ($/yr)	Emission reduction (tpy)	Cost effectiveness [a] ($/ton)
Control Option TR6				
1.5	0.1	700	0.016	43,000
1.5	5	(13)	0.81	(16)
3.37	0.1	680	0.036	19,000
3.37	5	(920)	1.8	(510)
8	0.1	630	0.12	5,500
8	5	(3,200)	0.016	(550)
Control Option TR7				
1.5	0.1	81,000	0.050	2,400,000
1.5	5	81,000	2.5	47,000
3.37	0.1	81,000	0.11	1,100,000
3.37	5	81,000	5.6	21,000
8	0.1	81,000	0.36	330,000
8	5	81,000	18	6,600

[a] Relative to uncontrolled for Control Option TR6 and relative to Control Option TR6 for Control Option TR7.

Capital costs for submerged fill were estimated assuming the capital costs for retrofitting one station that loads containers are about half of the costs for retrofitting one arm that loads transport vehicles. Annual costs for submerged fill were estimated using the same procedures as in the analysis for Control Option TR1. Costs for the closed vent and flare system were scaled from costs developed from vendor information in the analysis for the OLD analysis (see docket item EPA–HQ–OAR–2003–0138–0053).

Uncontrolled emissions were estimated using two approaches. One approach was to use the vehicle refueling equation presented in AP–42 chapter 5.2. This approach was used in the analysis for the OLD NESHAP because surveyed OLD facilities were using nozzles like those used at gasoline service stations. A problem with this approach is that it is not reliable at low vapor pressures. Specifically, as the vapor pressure approaches zero, the emissions are estimated to be negative. Therefore, we also estimated emissions using a second approach, which was to use the transfer rack loss equation in AP–42 chapter 5.2 (*i.e.,* the same approach that we used to estimate emissions from transport vehicles), but with one modification. It is not clear that the splash-loading factor in AP–42 is applicable for container loading given the much lower fill rate of containers. Therefore, we selected a saturation factor (*i.e.,* 0.88) that, when used in the transfer rack loss equation, produced the same emissions as the vehicle refueling equation when the Reid vapor pressure of transferred material is 3.37 psia (this is the vapor pressure used for models in the OLD analysis). Using this factor gave higher emissions estimates than the vapor refueling equation for Reid vapor pressures lower than 3.37 psia, and it gave higher emissions for Reid vapor pressures higher than 3.37 psia. To estimate controlled emissions for Control Option TR6, we assumed the saturation factor would be 0.6, as in the analysis for Control Option TR1. Thus, we assumed Control Option TR6 reduces emissions by 32 percent ([0.88 − 0.6]/[0.88] = 0.32). Controlled emissions for Control Option TR7 were assumed to be 2 percent of the emissions for Control Option TR6.

The results of this analysis show the cost impacts for Control Option TR6 are reasonable for throughputs greater than about 1 million gal/yr over the range of vapor pressures specified for the model transfer racks. The analysis also shows

the cost impacts of Control Option TR7 are unreasonable for all of the same model transfer racks. Thus, for transfer operations that include the loading of regulated material into containers, we are proposing that the Uniform Standards require submerged loading. In addition, when a loaded container contains regulated material and is maintained on site, all openings in the containers would have to be equipped with covers and closure devices, which you would have to maintain in the closed position except when access to the container is necessary (*e.g.,* for adding or removing material, sampling or cleaning).

We are also proposing other options that have equal or better performance that may be used instead of submerged loading, or that may be required, if justified, by referencing subparts. These other options include using fitted openings in conjunction with transfer line purging, which is specified in the Gasoline Distribution NESHAP (40 CFR part 63, subpart R). We are also proposing requirements for compliance approaches that are based on Control Options TR8 and TR9. These proposed requirements are a consolidated and streamlined version of the requirements in the Generic MACT for Containers and OLD NESHAP. If you use a closed vent system and control device, the control device would be required to reduce regulated material emissions by 95 percent, as in current rules. Inspection requirements for both closed vent systems and vapor balancing systems would be the same as for such systems used to convey emissions from loading of transport vehicles.

If you load a container 55 gallons or larger with material that has a MTVP greater than 4 psia and use the container for onsite storage of that material, then the container would be subject to either annual vapor tightness testing in accordance with Method 27 of 40 CFR part 60, appendix A–8, or annual monitoring of potential leak interfaces using Method 21 of 40 CFR part 60, appendix A–7. The leak definition for the EPA Method 21 testing would be 500 ppmv. These testing or monitoring requirements are needed to demonstrate that transferred materials with high vapor pressures are not emitted from storage. We request comment on the burden and costs of this proposed requirement to conduct vapor-tightness testing using Method 27 of 40 CFR part 60, appendix A–8. For example, we are interested in estimates of the number of containers that would have to be retrofitted with vapor-collection equipment, the costs of such retrofits and the fraction of the volume stored in such containers that exceeds the 4-psia threshold. In addition, since the MTVP of a given material varies, depending on location, we request comment on whether a threshold based on another parameter would be easier to implement.

12. How did the EPA determine the definitions of terms used in proposed subpart I?

As discussed in section VI.B.16 of this preamble, all definitions are located in proposed 40 CFR part 65, subpart H. Most of the definitions that are used in proposed subpart I are unchanged from the definitions in current rules, such as 40 CFR part 63, subpart WW and subpart EEEE. We are also proposing definitions for the terms ''barge,'' ''fittings'' and ''pressure vessel,'' which are not defined in current rules. The vapor balancing requirements for storage vessels specify that emissions from the storage vessel may be vapor balanced to a barge that is providing the liquid to fill the storage vessel. To clarify what type of vessel qualifies as a barge, we are proposing to define a barge as ''any vessel that transports regulated material liquids in bulk on inland waterways or at sea.''

We are proposing to add a definition for the term ''storage capacity.'' This term is intended to take the place of the term ''capacity'' that is defined in 40 CFR part 63, subpart WW. We are proposing the change to avoid possible confusion because the term capacity is also used in a different context in proposed 40 CFR part 65, subpart M. We are also modifying the definition to specify that storage capacity of a flat-bottomed storage vessel is determined by multiplying the internal cross-sectional area of the storage vessel by the internal height of the shell, but the calculation for storage vessels with a sloped bottom or cone-up or cone-down bottoms need to be adjusted to account for the fact that the floor is not flat.

We are proposing to include a definition for ''automatic bleeder vent (vacuum breaker vent).'' Vacuum breaker vents equalize the pressure across a landed floating roof when liquid is either being withdrawn or added below the landed roof. Current rules do not include a definition for such devices, but historically vacuum breaker devices have been a covered well opening with a leg attached to the underside of the cover. When the roof lands, the leg opens the vent by lifting the cover off the well. Recently, we learned of a new design that is activated by pressure or vacuum differences across the roof. Theoretical calculations have shown such vents should open only while the roof is landed, not while it is floating. Based on this analysis, we have decided to include both mechanically activated and pressure/vacuum activated devices in the proposed definition of ''automatic bleeder vent (vacuum breaker vent).'' We request additional information, in particular, any test data that either supports or contradicts the theoretical analysis.

Finally, we are proposing to use a new definition of ''maximum true vapor pressure'' that excludes the list of methods that may be used to determine MTVP. In proposed subpart I, this list has been moved to 40 CFR 65.306. We also added a new method to the list: *Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatography.* This method was developed because existing methods cannot be applied to heavy crude oils. We moved the list of methods to 40 CFR 65.306 because we are also proposing three additional changes to the procedures for determining MTVP that cannot be readily included in a definition. First, we are proposing to require testing to determine MTVP of mixtures (such as petroleum liquids) and to allow information from reference texts to be used only for pure compounds. We are proposing this change because we are concerned that the compositions of mixtures (*e.g.,* crude oils) vary considerably depending on their source and how they are handled before storage. Thus, average or generic values for a class of materials do not necessarily accurately represent the characteristics of the material in each storage vessel. Second, we are proposing to require new determinations each time a storage vessel is filled with a different type of material. This is an implied requirement in current rules, but this change clearly states the requirement. Third, because the composition of mixtures can vary (as noted above), we are proposing to require redetermination of the MTVP annually if stored materials are mixtures and previous testing has determined the MTVP is below the thresholds for control, as specified in Table 1 of proposed subpart I (and Table 1 of this preamble).

IV. Summary and Rationale for the Proposed 40 CFR Part 65 National Uniform Emission Standards for Equipment Leaks—Subpart J

A. Summary

We are proposing new Uniform Standards for control of emissions from equipment leaks. These Uniform Standards for equipment leaks would

apply only to equipment that is subject to a regulation that references provisions in 40 CFR part 65, subpart J, for control of equipment leaks. We would only issue regulations that reference provisions of 40 CFR part 65, subpart J, once we have determined that those provisions meet applicable statutory requirements for a particular source category (*e.g.,* MACT, AMOS, BSER).

In section IV of this preamble, the term ''we'' refers to the EPA and the term ''you'' refers to owners and operators affected by the proposed standards. Section IV.A.1 of this preamble identifies the regulated sources under the proposed 40 CFR part 65, subpart J. Sections IV.A.2 through 4 of this preamble summarize the proposed standards for equipment leaks. Section IV.A.5 of this preamble summarizes the proposed standards for using an optical gas imaging instrument to detect leaks. Section IV.A.6 of this preamble summarizes the notification, reporting and recordkeeping requirements. Section IV.B of this preamble presents the rationale behind the development of the proposed standards.

1. What parts of my plant are affected by the proposed rule?

The proposed 40 CFR part 65, subpart J includes requirements for equipment in process units, closed vent systems and fuel gas systems, including valves, pumps, connectors, agitators, PRD, compressors, sampling connection systems, open-ended valves and lines, instrumentation systems and any other types of equipment specified by the referencing subpart that contain or contact regulated material (as defined by the referencing subpart). This subpart also includes requirements for closed-purge and closed-loop systems used to control emissions from certain types of equipment. Proposed 40 CFR part 65, subpart J does not include applicability provisions; instead, the referencing subpart would define what equipment in that source category is subject to the provisions of the Uniform Standards.

2. What are the proposed general requirements for complying with this subpart?

Your equipment would be subject to some or all of the requirements of 40 CFR part 65, subpart J when another subpart references the use of provisions of subpart J for air emission control. In addition, you would be required to meet the general provisions applicable to part 65 (*i.e.,* subpart H of 40 CFR part 65) and the general provisions applicable to the referencing subpart (*i.e.,* subpart A of 40 CFR parts 60, 61 or 63).

3. What are the types of techniques we are proposing to reduce emissions from equipment leaks?

Equipment leak standards consist of techniques to detect leaks based on sensory inspections, instrument monitoring or use of an optical gas imaging instrument, as applicable. Equipment design standards specify requirements regarding the use, design or operation of the equipment. Each of these techniques is summarized in this section.

Sensory monitoring. Sensory monitoring includes visual, audible, olfactory or any other sensory detection method used to determine a potential leak to the atmosphere. If you found indications of a potential leak, you would be required either to: (1) Repair the equipment such that the indications of a potential leak to the atmosphere are no longer evident; (2) determine that no bubbles are observed at potential leak sites during a leak check using a soap solution; or (3) conduct instrument monitoring as described in the next paragraph to determine if the instrument reading is above the applicable threshold (indicating that the equipment is leaking) and, if the equipment is leaking, repair the leak as described in section IV.A.4 of this preamble.

Instrument monitoring. Instrument monitoring would require you to check for leaks with a portable instrument in accordance with Method 21 of 40 CFR part 60, appendix A–7. A leak would be detected if you obtain an instrument reading above the threshold (*i.e.,* leak definition) specified in the applicable section of the proposed regulation. If you detect a leak, you would be required to repair the leak as described in section IV.A.4 of this preamble. The frequency at which you would be required to conduct instrument monitoring is specified for each type of equipment. For some equipment, the required monitoring frequency varies depending on the percentage of the equipment in the applicable process unit that was determined to be leaking in previous monitoring periods. In addition to following the procedures in Method 21 of 40 CFR part 60, appendix A–7, the proposed rule would require you to conduct a calibration drift assessment at the end of each monitoring day. The proposed rule also specifies procedures that would allow you to correct instrument readings for background concentrations of regulated materials.

Optical gas imaging. Another method of detecting leaks from equipment is to scan equipment using a device or system specially designed to use one of several types of remote sensing techniques, including optical gas imaging of infrared wavelengths, differential absorption light detection and ranging [DIAL], and solar occultation flux. The most common optical gas imaging instrument (also referred to as a ''camera'') is a passive system that creates an image based on the absorption of infrared wavelengths. A gas cloud containing certain hydrocarbons (*i.e.,* leaks) will show up as black or white plumes (depending on the instrument settings and characteristics of the leak) on the optical gas imaging instrument screen. This type of optical gas imaging instrument is the device on which our optical gas imaging provisions are based.

On December 22, 2008, we published an Alternative Work Practice (AWP) for LDAR that includes a combination of optical gas imaging and instrument monitoring techniques (73 FR 78199). The AWP provisions are located in the General Provisions in 40 CFR parts 60, 61 and 63, so any source subject to LDAR requirements in any current equipment leak rule may elect to comply with this AWP. (This includes the proposed Uniform Standards, as proposed 40 CFR part 65, subpart H specifies that those sections would continue to apply to the referencing subparts.) In addition, we are proposing the optical gas imaging-only provisions described in section IV.A.5 of this preamble. If specifically allowed by your referencing subpart, you would be allowed to use optical gas imaging rather than instrument monitoring to detect leaks from your equipment. You would be required to comply with the leak survey procedures for an optical gas imaging device that will be proposed in 40 CFR part 60, appendix K.

Equipment design. Proposed standards for some equipment consist of design features that either provide an additional barrier to emissions or provide for collection of otherwise discharged material for recycle, reuse or treatment. Where applicable, the specific requirements for each type of equipment and control level are described in section IV.A.4 of this preamble.

4. What are the specific equipment leak standards we are proposing?

As in current equipment leak rules, the proposed Uniform Standards for equipment leaks are based on a combination of standards, including

LDAR programs, equipment design standards and performance standards. In addition, we are proposing two alternative means of compliance that can be used only in specific situations. Many of these proposed equipment leak standards are consistent with current equipment leak standards. The discussion in this section IV.A of the preamble describes all elements of the proposed standards. Section IV.B of this preamble discusses how we developed the proposed provisions and describes how the proposed provisions are consistent with one or more previous rules or why we are introducing additional requirements unique to this proposal.

For most types of equipment, current rules specify separate requirements for equipment in different types of service (*e.g.,* gas and vapor service, light liquid service). The proposed Uniform Standards also follow this type of approach; for certain types of equipment (*e.g.,* valves), the proposed Uniform Standards include specific instrument monitoring requirements for equipment in gas and vapor service and equipment in light liquid service and specify specific sensory monitoring requirements for equipment in heavy liquid service. We are also proposing that the sensory monitoring requirements would apply to other equipment that meet certain criteria, such as equipment in regulated service less than 300 hr/yr and equipment that contains or contacts regulated material, but not in sufficient quantities to be operating in regulated material service.

Section IV.A.4 of this preamble describes proposed standards for specific types of equipment. After you identify indications of a potential leak using sensory monitoring or identify a leak using instrument monitoring, optical gas imaging or other method, the proposed rule would require you to repair the leaking equipment using procedures that also are summarized in section IV.A.4 of this preamble. Finally, alternative equipment leak standards that are provided in the proposed rule are summarized in section IV.A.4 of this preamble.

Proposed requirements for valves in gas and vapor service and valves in light liquid service. We are proposing that for valves in gas and vapor service and valves in light liquid service, you would be required to conduct instrument monitoring on a monthly basis for at least the first 2 months after initial startup. An instrument reading of 500 parts per million (ppm) or greater would indicate a leak requiring repair. Following the first 2 months, you would be required to conduct instrument monitoring at a frequency dependent upon the percentage of leaking valves within the process unit in those first 2 months (the proposed frequencies range from monthly if more than 2 percent of the valves were leaking to biennially if less than 0.25 percent of the valves were leaking). We are also proposing that you may use prior monitoring data in lieu of conducting initial monthly monitoring. For example, if your valves in gas and vapor service and valves in light liquid service are already subject to instrument monitoring and repair of leaks at 500 ppm or greater, you would be able to consider the monitoring data collected under your current rule to determine your monitoring frequency for the Uniform Standards.

We are also proposing provisions for subgrouping valves for monitoring purposes. We are proposing specific monitoring and repair requirements for valves located at a plant site with fewer than 250 total valves, valves for which the valve mechanism is not connected to a device that penetrates the valve housing (*e.g.,* most check valves), unsafe-to-monitor valves and difficult-to-monitor valves.

Proposed requirements for pumps in light liquid service. We are proposing monthly instrument monitoring for pumps in light liquid service. The instrument reading indicating a leak would vary based on the type of material being handled by that pump: 5,000 ppm or greater for pumps handling polymerizing monomers and 2,000 ppm or greater for all other pumps. In addition to instrument monitoring, you would be required to conduct a weekly visual inspection of all pumps in light liquid service for dripping liquids. If you found indications of liquids dripping, you would be required either to repair the pump seal, eliminating the indications of liquids dripping or to conduct instrument monitoring. If you elected to conduct instrument monitoring, the instrument reading that defines a leak requiring repair would be 5,000 ppm for a pump handling polymerizing monomers or 2,000 ppm for all other pumps.

We are also proposing specific monitoring and repair requirements for pumps equipped with a dual mechanical seal system that includes a barrier fluid system, pumps with no externally actuated shaft penetrating the pump housing, pumps located within the boundary of an unmanned plant site, unsafe-to-monitor pumps and difficult-to-monitor pumps.

Proposed requirements for connectors in gas and vapor service and connectors in light liquid service. If your referencing subpart specifically references proposed 40 CFR 65.422, you would be required to conduct instrument monitoring for connectors in gas and vapor service and connectors in light liquid service, and you would be required to conduct initial instrument monitoring within 12 months of the compliance date specified in a referencing subpart or 12 months after initial startup, whichever is later. We are also proposing to specify that if all the connectors in a process unit have been monitored for leaks prior to the compliance date specified in the referencing subpart, no initial monitoring is required, provided that either no process changes have been made since the prior monitoring or you can show that the results of the monitoring reliably demonstrate compliance despite process changes. Following the initial monitoring, you would be required to conduct instrument monitoring at a frequency between annually and every 8 years, depending on the percentage of leaking connectors within the process unit. An instrument reading of 500 ppm or greater would indicate a leak that would require repair. We are also proposing specific monitoring and repair requirements for unsafe-to-monitor connectors; difficult-to-monitor connectors; and inaccessible, ceramic or ceramic-lined connectors. Note that you would only be required to conduct instrument monitoring for connectors in gas and vapor service and connectors in light liquid service if your referencing subpart specifies that you must comply with proposed 40 CFR 65.422.

Proposed requirements for agitators in gas and vapor service and agitators in light liquid service. We are proposing monthly instrument monitoring for agitators in gas and vapor service and agitators in light liquid service. An instrument reading of 10,000 ppm or greater would indicate a leak that would require repair. In addition to instrument monitoring, you would be required to conduct weekly visual inspection of agitators. If you found indications of liquids dripping from the agitator seal, you would be required either to repair the agitator seal, eliminating the indications of liquids dripping or to conduct instrument monitoring. If you elected to conduct instrument monitoring, the instrument reading that defines a leak would be 10,000 ppm or greater. We are also proposing specific monitoring and repair requirements for agitators equipped with a dual mechanical seal system that includes a barrier fluid system, agitators with no externally actuated shaft penetrating the

agitator housing, agitators located within the boundary of an unmanned plant site, agitators obstructed by equipment or piping, unsafe-to-monitor agitators and difficult-to-monitor agitators.

Proposed requirements for PRD. Proposed 40 CFR 65.424 includes operational requirements and pressure release management requirements for all PRD in regulated material service. We are proposing that you operate PRD in gas or vapor service with an instrument reading less than 500 ppm above background. If your PRD includes or consists of a rupture disk, you would be required to install a replacement disk no later than 5 calendar days after each pressure release. In addition, after each pressure release from a PRD in gas or vapor service (regardless of the type of PRD), you would be required to conduct instrument monitoring to confirm that the instrument reading is less than 500 ppm no later than 5 calendar days after the PRD returns to regulated material service following a pressure release.

In addition, we are proposing provisions that would apply only if your referencing subpart specifies that no releases to the atmosphere are allowed from any PRD in regulated material service. We are proposing that for each such PRD, you would be required to install and operate a monitor capable of identifying a pressure release, recording the time and duration of each pressure release and notifying operators that a pressure release has occurred. We are also proposing that if the monitor is capable of monitoring concentration of any flow through the PRD, then you would not also be required to conduct separate instrument monitoring no later than 5 calendar days after the PRD returns to regulated material service following a pressure release to confirm that the instrument reading is less than 500 ppm. You would also be required to calculate, record and report the quantity of regulated material released during each pressure relief event. Note that your referencing subpart may include other requirements for releases to the atmosphere as well.

Proposed requirements for compressors. We are proposing two compliance options for compressors in regulated material service. The first would be to equip the compressor with a seal system that includes a barrier fluid system and that prevents leakage of process fluid to the atmosphere. You would determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system or both. You would also be required to equip the compressor with a sensor that would detect a failure of the seal system, the barrier fluid system or both. If a failure is indicated by either of those methods, a leak is detected, and you would be required to repair the leak. You would also be required to conduct sensory monitoring for all potential points of vapor leakage on the compressor other than the seal system.

The second option would be to designate that the compressor operates with an instrument reading of less than 500 ppm above background at all times. After you initially confirm that the compressor has an instrument reading less than 500 ppm, you would be required to conduct ongoing instrument monitoring at least annually to demonstrate that the compressor operates with an instrument reading of less than 500 ppm above background. If the instrument reading from any part of the compressor is 500 ppm above background or greater, the compressor would not be in compliance with proposed 40 CFR part 65, subpart J until the next instrument reading of less than 500 ppm above background.

Proposed requirements for sampling connection systems. We are proposing equipment design standards for sampling connection systems. You would be required to equip the sampling connection system with a closed-purge, closed-loop or closed vent system. You would be required to control purged process fluids by returning them to the process line, to a process, routing them to a control device, routing them to a fuel gas system or treating them in a waste management unit, a hazardous waste treatment facility or a device used to burn used oil for energy recovery (all of which would be required to meet specific standards). Gases displaced during filling of the sample container and gases remaining in the tubing or piping between the closed-purge system valve(s) and sample container valves(s) after the valves are closed and the sample container is disconnected are not considered to be purged process fluids and would not be required to be collected or captured. We are proposing to clarify that analyzer vents are considered sampling connection systems (and that CEMS are not considered analyzer vents). In-situ sampling systems and systems without purges would be exempt from these standards.

Proposed requirements for open-ended valves and lines in gas and vapor service and open-ended valves and lines in light liquid service. We are proposing equipment and operational standards for open-ended lines and open-ended valves. You would be required to equip open-ended valves and lines with a cap, blind flange, plug or second valve. The cap, blind flange, plug or second valve would be required to seal the open-ended valve or line at all times, except during operations requiring process fluid flow through the open-ended valve or line, during maintenance or during operations that require venting the line between block valves in a double block and bleed system. If the open-ended valve or line is equipped with a second valve, you would be required to close the valve on the process fluid end before closing the second valve.

In addition, you would be required to conduct annual instrument monitoring to demonstrate that the open-ended valve or line operates with an instrument reading of less than 500 ppm above background (*i.e.,* that the cap, blind flange, plug or second valve seals the open-ended valve or line at all times). If the instrument reading is 500 ppm above background or greater, the open-ended valve or line would not be in compliance with proposed 40 CFR part 65, subpart J until the next instrument reading of less than 500 ppm above background.

Open-ended valves and lines in an emergency shutdown system that are designed to open automatically in the event of a process upset would be exempt from the equipment design and instrument monitoring requirements. However, if your referencing subpart specifies that releases to the atmosphere from these types of open-ended valves and lines are not allowed, then any time an open-ended valve or line of this type does release to the atmosphere, it would not be in compliance with proposed 40 CFR part 65, subpart J. (Note that your referencing subpart may include other requirements for releases to the atmosphere as well.) In addition, open-ended valves and lines containing materials that would auto catalytically polymerize or would present an explosion, serious overpressure or other safety hazard if capped or equipped with a double block and bleed system would be exempt from the equipment and instrument monitoring requirements. Instead, you would be required to conduct sensory monitoring for these open-ended valves and lines.

Proposed requirements for equipment in closed vent systems and fuel gas systems. We are proposing operational standards for equipment in closed vent systems and fuel gas systems. You would be required to conduct annual instrument monitoring to demonstrate that each piece of equipment in a closed vent system or fuel gas system operates with an instrument reading of less than 500 ppm above background. If the

instrument reading is 500 ppm above background or greater, the equipment would not be in compliance with proposed 40 CFR part 65, subpart J until the next instrument reading of less than 500 ppm above background.

Proposed requirements for detecting leaks from other equipment. We are proposing that sensory monitoring would be the basic level of control for all equipment. Sensory monitoring would be required for all equipment that contains or contacts regulated material, but is not required to comply with the specific requirements in proposed 40 CFR 65.420 through 65.427. This would include: (1) Equipment at a plant site with less than 1,500 total pieces of equipment; (2) equipment that contains or contacts regulated material, but not in sufficient quantities to be operating in regulated material service; (3) equipment in regulated material service less than 300 hr/yr; (4) valves, pumps, connectors and agitators in heavy liquid service; (5) connectors not required by your referencing subpart to comply with 40 CFR 65.422; (6) instrumentation systems; (7) PRD in liquid service; (8) any equipment for which sensory monitoring is required specifically by a provision in proposed 40 CFR 65.420 through 65.427 (*e.g.,* potential points of vapor leakage on the compressor other than the seal system, open-ended valves and lines containing materials that would auto catalytically polymerize or would present an explosion, serious overpressure or other safety hazard if capped or equipped with a double block and bleed system); and (9) any other equipment, as specified by your referencing subpart. If you found indications of a potential leak, you would be required either to repair the equipment, eliminating the indications of the potential leak or conduct instrument monitoring to confirm whether there is a leak within 5 calendar days of detection. If you elected to conduct instrument monitoring, the instrument reading that defines a leak requiring repair is specified in proposed Table 1 to subpart J of 40 CFR part 65.

We are also proposing special requirements for equipment in vacuum service. You would be required to identify equipment operating in vacuum service. You would also be required to demonstrate that the equipment is operating in vacuum service by installing and maintaining a pressure gauge and alarm system that will alert an operator immediately and automatically when the equipment is not operating vacuum service. If the alarm were triggered, you would be required either to initiate procedures immediately to return the equipment to vacuum service or to begin to comply with the applicable requirements of proposed 40 CFR part 65, subpart J (*e.g.,* comply with the instrument monitoring requirements of proposed 40 CFR 65.420 for valves in gas and vapor service and valves in light liquid service).

Proposed repair requirements. We are proposing to specify that when the standards indicate that you are required to repair a leak, you would be required to do so as soon as practical, but not later than 15 calendar days after the leak is detected. You would also be required to make a first attempt at repair no later than 5 calendar days after the leak is detected. For leaks detected through instrument monitoring or optical gas imaging, repair would include instrument monitoring or optical gas imaging within the specified time frame to verify that the leak was repaired successfully.

We are also proposing to allow repairs to be delayed in a few specific situations. First, you would be allowed to delay repair if the repair is technically infeasible within 15 days of detection without a process unit shutdown. We are proposing to require repair of this equipment as soon as practical, but no later than the end of the next process unit shutdown or 5 years after detection, whichever is sooner. Any shutdown of 24 hours or longer would be considered the next process unit shutdown during which you would be required to repair the leak. Second, you would be allowed to delay repair if you determine that repair personnel would be exposed to an immediate danger as a consequence of complying with the repair requirement and you designate the equipment as unsafe-to-repair. Third, a delay in repair would be allowed for equipment that is isolated from the process and that does not remain in regulated material service. Fourth, for valves, connectors and agitators, delay of repair would be allowed if you demonstrate that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. When you do repair the valve, connector or agitator, you would be required to ensure the purged material is collected and destroyed, collected and routed to a fuel gas system or process or routed through a closed vent system to a control device. Finally, for pumps, you would be allowed to delay repair up to 6 months after the leak was detected if you demonstrate that repair would require a design change such as replacement of the existing seal design with a new seal system or a dual mechanical seal system, installing a pump with no external shaft or routing emissions through a closed vent system to a control device or to a fuel gas system. Regardless of the reason that you delay repair, you would be required to continue instrument monitoring on the appropriate schedule for that type of equipment.

If you delay repair of a valve or connector beyond 15 days, we are proposing to require that you repair the leaking equipment by replacing the leaking equipment with low leak technology unless it is not technically feasible to do so. You would have several types of ''low leak technologies'' from which to select. For valves, you could elect to repack the valve, replace the leaking valve with a valve designed to accommodate specific types of packing or replace the existing valve with a bellow seal valve. For connectors, you would have the option to replace the flange gasket or the entire connector. If you cannot replace the leaking equipment with low leak technology, then you would be required to explain why that replacement is technically infeasible in your annual periodic report and to keep records of the demonstration that replacement is technically infeasible. In addition, if that equipment leaks again in the future and you delay the repair beyond 15 days, you would be required to conduct a new analysis of the technical feasibility of using low leak technology (*i.e.,* you would not be allowed to just refer to the previous demonstration).

Proposed alternative standards. We are proposing to provide an alternative compliance option specifically for equipment in regulated material service in batch operations. If you conduct instrument monitoring for equipment in batch operations, we are proposing to provide alternative monitoring frequencies to accommodate non-continuous operation. In addition, each time you reconfigured the process components and transport piping in the batch operation for the production of a different product, you would be required to monitor the equipment in the reconfigured process for leaks within 30 days of beginning operation of the process.

5. What are the proposed standards for using an optical gas imaging device to detect leaks?

We anticipate that for some source categories, specific requirements for using an optical gas imaging device to detect leaks without accompanying instrument monitoring could be an

appropriate alternative to the requirements described in section IV.A.4 of this preamble. Therefore, we are proposing to allow the use of optical gas imaging as a standalone technique for detecting equipment leaks in regulated material service. These provisions for leak detection would be allowed as an alternative only if your referencing subpart includes a direct reference to proposed 40 CFR 65.450. At this time, we are allowing only limited use of optical gas imaging because we believe that this technique currently is not suitable for detection of leaking compounds in all industry sectors due to the limitation of the number of compounds that can be screened using this technology. However, we fully expect that the technology will improve over time and that the number of industry sectors allowed to use this option will increase in the future.

Additionally, we are currently developing a protocol for using optical gas imaging techniques. The protocol will be proposed to be promulgated as appendix K to 40 CFR part 60. Proposed 40 CFR 65.450 specifies that you must follow this protocol if you opt to use optical gas imaging in lieu of EPA Method 21. This protocol will outline specifications of the equipment that must be used, calibration techniques, procedures for conducting surveys and training requirements for optical gas imaging instrument operators. The protocol will not specify the instrument that must be used, but it will provide specifications and performance criteria that must be met. The protocol will contain techniques to verify that your instrument can image the most prevalent chemical in your process unit. Because field conditions greatly impact detection of the regulated material using optical gas imaging, the protocol will describe the impact that these field conditions may have on readings and how to address them, as well as when monitoring with this technique is inappropriate. These field conditions include distance to the target, complex thermal environments, position of the sun, background temperatures, humidity, wind speed, wind direction, angle to the target and time of day. The protocol will also address difficulties with identifying equipment and leaks in dense industrial areas.

We note that, to date, appendix K to 40 CFR part 60 has not been proposed for review and comment. When appendix K to 40 CFR part 60 is proposed, we will request comments on that appendix K. In addition, we intend to provide an opportunity to comment on the application of appendix K to 40 CFR part 60 to the optical gas imaging provisions in these Uniform Standards.

If you elect to comply with 40 CFR 65.450, then we are proposing that, unless your referencing subpart specifies otherwise, you would monitor your equipment bimonthly, and that the optical gas imaging instrument would be required to detect leaks at 60 grams per hour or greater. Any image that appears on the optical gas imaging instrument screen would be considered a leak requiring repair, regardless of the type of equipment leaking. You would be required to follow the repair requirements in proposed 40 CFR 65.432, except that the monitoring to verify repair would be monitoring using the optical gas imaging instrument rather than instrument monitoring. You would be allowed to delay repair of leaks under the same provisions as if you conducted instrument monitoring (proposed 40 CFR 65.432(d)), including leaks that are technically infeasible to repair without a process unit shutdown and leaks in unsafe-to-repair equipment.

6. What are the notification, reporting and recordkeeping requirements?

Notification of Compliance Status. We are proposing that the Notification of Compliance Status required by 40 CFR 65.225 would include: (1) The process unit, closed vent system or fuel gas system identification; (2) the number of each equipment type (*e.g.,* valves, pumps); (3) method of compliance with the standard for that equipment; and (4) whether you used monitoring data generated before the regulated source became subject to the referencing subpart to qualify for less frequent monitoring of valves and/or connectors. If your method of compliance is a closed vent system and control device or a fuel gas system, you would include the applicable information specified in proposed 40 CFR part 65, subpart M. In addition, if your referencing subpart required you to comply with 40 CFR 65.424(c) for PRD in regulated material service, you would be required to provide: (1) A description of the monitoring system to be implemented and (2) a description of the alarms or other methods by which operators will be notified of a release.

Semiannual periodic report. We are proposing that the semiannual periodic report required by 40 CFR 65.225 would include: (1) For compressors that you choose to operate at an instrument reading of less than 500 ppm, the date of an instrument reading of 500 ppm or greater and the date of the next instrument reading less than 500 ppm; (2) for PRD in gas or vapor service, any instrument reading of 500 ppm or greater more than 5 days after the PRD returns to service after a release; (3) for open-ended valves and lines, the date of an instrument reading of 500 ppm or greater and the date of the next instrument reading less than 500 ppm; (4) for PRD for which the referencing subpart states may not release to the atmosphere, information about each release, including duration of the release and an estimate of the quantity of substances released; (5) if your referencing subpart specifies that releases to the atmosphere from open-ended valves and lines in an emergency shutdown system that are designed to open automatically in the event of a process upset are not allowed, information about each release; (6) for equipment in closed vent systems and fuel gas systems, the date of an instrument reading of 500 ppm or greater and the date of the next instrument reading less than 500 ppm; and (7) for closed vent systems, control devices and fuel gas systems, the applicable information specified in proposed 40 CFR part 65, subpart M.

Annual periodic report. We are proposing that the annual periodic report would include a summary table showing: (1) The process unit identification; (2) the number of each type of equipment for which leaks were detected, either by instrument monitoring or by other method (*e.g.,* sensor on a compressor seal system); (3) the total number of valves and connectors monitored and the percent leaking; (4) the number of leaks for each type of equipment that were not repaired; and (5) the number of valves that are determined to be non-repairable. The annual periodic report also would include: (1) Information about instances of delayed repairs, including the demonstration that it was technically infeasible to replace a leaking valve or connector with low leak technology; (2) for PRD in gas and vapor service, confirmation that you conducted all required instrument monitoring to demonstrate that the instrument reading was less than 500 ppm no later than 5 calendar days after a PRD returned to regulated material service following a pressure release; (3) for compressors operated at an instrument reading of less than 500 ppm and open-ended valves and lines, confirmation that you conducted all required instrument monitoring to demonstrate that the instrument reading is less than 500 ppm; (4) for open-ended lines and valves, confirmation that you conducted all monitoring to demonstrate that the instrument reading is less than 500 ppm; (5) for equipment

in closed vent systems and fuel gas systems, confirmation that you conducted all monitoring to demonstrate that the instrument reading is less than 500 ppm; (6) for closed vent systems, control devices and fuel gas systems, the applicable information specified in proposed 40 CFR part 65, subpart M; (7) for regulated sources not included in the Notification of Compliance Status due to later compliance dates, the information required under the Notification of Compliance Status; and (8) any revisions to items reported in an earlier Notification of Compliance Status if the method of compliance has changed since the last report.

Recordkeeping. We are proposing that you would keep the following general records: (1) Equipment identification (including identification of unsafe- or difficult-to-monitor equipment) if the equipment is not physically tagged; (2) for unsafe- or difficult-to-monitor equipment, an explanation of why it is unsafe- or difficult-to-monitor and a planned monitoring schedule; (3) identification of compressors operating with an instrument reading of less than 500 ppm; (4) documentation of the determination that equipment is in heavy liquid service or is in regulated material service less than 300 hr/yr; (5) for equipment in vacuum service, records of any pressure alarms triggered and the duration the equipment was not in vacuum service; (6) monitoring instrument calibrations; (7) documentation and dates of monitoring events, leak detection, repairs and repair attempts, including documentation explaining why repair must be delayed and why a valve or connector could not be repaired using low leak technology, if applicable; and (8) the applicable records specified in proposed 40 CFR part 65, subpart M for closed vent systems, control devices and fuel gas systems used to comply with this subpart.

We are also proposing that you would keep the following records specific to equipment type: (1) For valves, the monitoring schedule for each process unit, documentation of the percent leaking calculation and documentation of valve subgrouping; (2) for pumps, documentation of visual inspections, documentation of dual mechanical seal pump visual inspections and documentation of the criteria that indicate failure of the seal system or the barrier fluid system; (3) for connectors, the start date and end date of each monitoring period for each process unit and documentation of the percent leaking calculation; (4) for agitators, documentation of visual inspections, documentation of dual mechanical seal agitator visual inspections and documentation of the criteria that indicate failure of the seal system or the barrier fluid system; (5) for PRD, the dates and results of each compliance test conducted for PRD in gas or vapor service after a pressure release and, if applicable, documentation of pressure releases (including duration and quantity of regulated material released); (6) for compressors, documentation of the criteria that indicate failure of the seal system or the barrier fluid system and, if applicable, the dates and results of each compliance test for compressors operating under the alternative compressor standard; (7) for sampling connection systems, documentation of the date and amount of each purge; (8) for open-ended lines and valves, the dates and results of each compliance test; and (9) for equipment in closed vent systems and fuel gas systems, the dates and results of each compliance test.

If you elect to perform instrument monitoring to demonstrate compliance for equipment in batch operations, you would record: (1) A list of equipment added to the batch operation since the last monitoring period; (2) the date and results of the monitoring for equipment added to a batch operation since the last monitoring period; (3) a statement that the inspection was performed if no leaking equipment is found; and (4) the proportion of the time during the calendar year that all the equipment in regulated material service in the batch operation is in use, including documentation that the equipment is in regulated material service the day you conduct monitoring.

For optical gas imaging, you would be required to keep: (1) Identification of the equipment and process units for which you choose to use the optical gas imaging instrument; (2) any records required to be kept by 40 CFR part 60, appendix K; (3) the video record used to document the leak survey results; and (4) the documentation of repairs and repair attempts otherwise required by proposed 40 CFR part 65, subpart J.

B. Rationale

The proposed equipment LDAR requirements in the Uniform Standards are based on a survey and analysis of emissions reduction techniques that considered current practices and advances in technology, as well as the emissions reduction impacts and the cost impacts for model plants implementing those practices and technologies. The options considered in this analysis were developed mostly based on current federal rules, such as the National Emission Standards for Equipment Leaks—Control Level 2 Standards (40 CFR part 63, subpart UU; ''Level 2 EL Generic MACT''), the Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 (40 CFR part 60, subpart VVa; ''NSPS VVa'') and the National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks (40 CFR part 63, subpart H; ''HON''). Other options were developed from state and local rules and would be additional requirements not yet included in current federal regulations.

The proposed requirements for each type of equipment are the requirements that we determined are the most effective and reasonable for reducing emissions from equipment leaks after reviewing current rules and considering the costs and emissions reductions associated with each option. As noted previously in this preamble, we will determine the nationwide emissions reductions and cost impacts for any source category from which we propose to reference these Uniform Standards in the future to ensure those impacts continue to be reasonable on a nationwide basis, as well as meet any applicable statutory requirements (*e.g.,* MACT, AMOS, BSER). The remainder of section IV.B of this preamble summarizes how the results of the analysis led us to the proposed requirements; a more detailed description of the development of the analysis is available in the technical memorandum, *Analysis of Emissions Reduction Techniques for Equipment Leaks,* in Docket ID No. EPA–HQ–OAR–2010–0869.

1. What were the options considered in the analysis and what are the cost and VOC emissions reduction impacts of those options?

We developed six model plants—three to represent chemical manufacturing processes and three to represent petroleum refineries. The chemical manufacturing models represent a range of process sizes, from a simple process with about 1,200 total pieces of equipment to a complex process with nearly 13,000 total pieces of equipment. The refinery models also represent a range of sizes, from a simple topping refinery with a total of about 1,800 pieces of equipment to a complex refinery with over 43,000 total pieces of equipment. These models allowed us to consider the costs and VOC emissions

reduction impacts for processes of various sizes in multiple industries. We are aware that there are process units and facilities larger than our largest model; however, these models were intended to cover a range of sizes representing a majority of the process units and facilities potentially subject to 40 CFR part 65, subpart J. In addition, the options considered for the Uniform Standards that are affected by economies of scale will have a greater impact on smaller processes than larger processes. We note that for each subpart that we propose to reference the Uniform Standards in the future, we will estimate nationwide costs and emissions reductions on a source category-specific basis. In most cases, we expect that since we have developed representative models for this analysis of the Uniform Standards, we will be able to use these model plants as a basis for each source category-specific analysis. We will then use available data from each specific source category to adjust the models to represent that industry more accurately, which will provide a better estimate of the source category-specific nationwide costs and emissions.

As a first step, we decided to consider the impacts of implementing a LDAR program at an uncontrolled facility. While we expect that most equipment in regulated material service is already subject to a basic LDAR program, we wanted to evaluate the impacts of that program rather than simply assuming that a basic LDAR program is effective. We determined the costs and VOC emissions associated with implementing a basic LDAR program (hereafter referred to as the ''baseline'') for each of the six models. The elements that make up the baseline LDAR program are described in the following paragraphs.

Most current equipment leaks regulations include two types of leak detection methodologies: Instrument monitoring using Method 21 of 40 CFR part 60, appendix A–7, and sensory monitoring. Based on our review of the requirements and the applicability of current rules, including federal, state and local rules, we determined that baseline was implementation of a LDAR program equivalent to the requirements in the National Emission Standards for Equipment Leaks—Control Level 1 (40 CFR part 63, subpart TT; ''Level 1 EL Generic MACT'') and Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Compound Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981 but Before November 7, 2006 (40 CFR part 60, subpart VV; ''NSPS VV''). These requirements include instrument monitoring using Method 21 of 40 CFR part 60, appendix A–7, for valves and agitators in gas and vapor service and for valves, pumps and agitators in light liquid service. The baseline leak definition for all of the above types of equipment is 10,000 ppm, and each piece of equipment must be monitored monthly, although valves may be transitioned to a less frequent monitoring schedule if they meet certain criteria (*e.g.,* the owner or operator may elect a reduced monitoring schedule if the percentage of valves leaking is equal to or less than 2.0 percent). The baseline requirements also include sensory monitoring for connectors; pumps, valves and agitators in heavy liquid service; PRD in liquid service; and instrumentation systems. Finally, the baseline requirements include instrument monitoring of PRD in gas and vapor service after a release to verify that the PRD is operating with an instrument reading of less than 500 ppm; equipping compressors with a seal system or maintaining them at or below an instrument reading of 500 ppm; handling of the process fluid collected through sampling connection systems properly; and equipping open-ended valves and lines with a cap, blind flange, plug, or a second valve.

We determined the cost and VOC emissions reduction impacts of the baseline LDAR program described above for each of the six models. We then calculated the cost effectiveness for the six models. The results of these calculations are shown in Table 10 of this preamble.

TABLE 10—BASELINE LDAR PROGRAM COSTS AND VOC EMISSIONS REDUCTION ESTIMATES FOR MODEL PLANTS

Model		Uncontrolled VOC emissions (tpy)	Capital cost ($)	Annualized costs without recovery credits ($)	VOC recovery credit ($)	Total annualized costs ($)	Total VOC emissions reduction (tpy)	Overall cost effectiveness ($/ton VOC)
Chemical Manufacturing Models	1	10	91,000	41,000	(2,900)	38,000	5.9	7,000
	2	79	460,000	130,000	(32,000)	98,000	63	2,000
	3	160	860,000	230,000	(62,000)	160,000	120	1,800
Petroleum Refinery Models	4	30	160,000	57,000	(14,000)	43,000	28	2,000
	5	270	960,000	260,000	(130,000)	140,000	250	1,000
	6	470	1,700,000	460,000	(210,000)	250,000	420	1,100

When we compared the cost effectiveness of the baseline conditions for each model to the number of pieces of equipment in the models, we found that implementing the baseline LDAR program is more cost effective for models with higher equipment counts. This is due to the fact that there are several costs in the analysis that are fixed regardless of the number of pieces of equipment, such as the cost of the monitoring instrument and the number of hours spent on administrative activities and preparing reports. In particular, we note that baseline is the least cost effective for the model with less than 1,500 pieces of equipment.

From baseline, we evaluated a total of five regulatory options, two for valves, two for pumps and one for connectors. In each of these options, we considered the impacts of increasing the stringency of one piece of the LDAR program, each option building on the one before it for that specific piece of equipment. We decided to develop the options in this manner to consider the effectiveness of each piece of the program separately and ensure that the LDAR program proposed for the Uniform Standards included the most appropriate pieces. The calculation methodologies used to develop the cost and emissions reduction impacts for each of the models are described in the technical memorandum, *Analysis of Emissions Reduction Techniques for Equipment Leaks,* in Docket ID No. EPA–HQ–OAR–2010–0869.

Throughout the rest of this section of the preamble, we present the impacts and cost effectiveness for each of the models. The costs and VOC emissions associated with each of the regulatory options were compared with the baseline costs and VOC emissions (or the previous option costs and VOC emissions, as appropriate) to determine the incremental costs and VOC emissions reduction impacts.

In Option 1 for valves, we considered the effect of lowering the leak definition from 10,000 ppm to 500 ppm for valves in gas and vapor service and valves in light liquid service. Table 11 of this preamble shows the incremental costs and VOC emissions reductions of lowering the leak definition from 10,000 ppm (baseline) to 500 ppm for valves in gas and vapor service and valves in light liquid service.

TABLE 11—MODEL PLANT COSTS AND VOC EMISSIONS REDUCTION ESTIMATES FOR OPTION 1 FOR VALVES (LEAK DEFINITION OF 500 PPM) INCREMENTAL TO BASELINE

Model		Capital cost ($)	Annualized costs without recovery credits ($)	VOC recovery credit ($)	Total annualized costs ($)	VOC emissions reduction (tpy)	Overall cost effectiveness ($/ton VOC)
Chemical Manufacturing Models	1	1,700	360	(350)	15	0.69	22
	2	6,200	1,300	(1,200)	97	2.4	40
	3	14,000	2,900	(2,500)	360	5.0	71
Petroleum Refinery Models	4	1,200	480	(210)	270	0.42	630
	5	13,000	5,400	(2,300)	3,000	4.7	650
	6	34,000	14,000	(5,900)	7,700	12	650

In Option 2 for valves, we considered further lowering the leak definition for valves in gas and vapor service and valves in light liquid service to 100 ppm. The leak definition of 100 ppm for valves is required in some state and local regulations, as well as consent decrees. However, we estimate that the incremental costs to reduce a ton of VOC emissions for this option increase significantly for all of the models compared to Option 1 for valves. Table 12 of this preamble shows the incremental costs and VOC emissions reductions of lowering the leak definition from 500 ppm (Option 1 for valves) to 100 ppm for valves in gas and vapor service and valves in light liquid service.

TABLE 12—MODEL PLANT COSTS AND VOC EMISSIONS REDUCTION ESTIMATES FOR OPTION 2 FOR VALVES (LEAK DEFINITION OF 100 PPM) INCREMENTAL TO OPTION 1 FOR VALVES

Model		Capital cost ($)	Annualized costs without recovery credits ($)	VOC recovery credit ($)	Total annualized costs ($)	VOC emissions reduction (tpy)	Overall cost effectiveness ($/ton VOC)
Chemical Manufacturing Models	1	3,800	960	(62)	900	0.12	7,300
	2	14,000	3,400	(360)	3,000	0.73	4,200
	3	31,000	7,500	(910)	6,600	1.8	3,600
Petroleum Refinery Models	4	5,300	2,900	(170)	2,800	0.33	8,400
	5	59,000	29,000	(1,500)	28,000	3.1	9,000
	6	150,000	83,000	(4,300)	79,000	8.7	9,100

In Option 1 for pumps, we considered the effect of lowering the leak definition from 10,000 ppm to 2,000 ppm for pumps in light liquid service. Table 13 of this preamble shows the incremental costs and VOC emissions reductions of lowering the leak definition from 10,000 ppm (baseline) to 2,000 ppm for pumps in light liquid service. The analysis showed that Option 1 for pumps is more cost effective for the chemical manufacturing models than for the refinery models.

TABLE 13—MODEL PLANT COSTS AND VOC EMISSIONS REDUCTION ESTIMATES FOR OPTION 1 FOR PUMPS (LEAK DEFINITION OF 2,000 PPM) INCREMENTAL TO BASELINE

Model		Capital costs ($)	Annualized costs without recovery credits ($)	VOC recovery credit ($)	Total annualized costs ($)	VOC emissions reduction (tpy)	Overall cost effectiveness ($/ton VOC)
Chemical Manufacturing Models	1	2,200	440	(130)	310	0.26	1,200
	2	5,900	1,200	(350)	830	0.70	1,200
	3	8,300	1,700	(490)	1,200	0.98	1,200
Petroleum Refinery Models	4	260	200	(15)	190	0.030	6,300
	5	2,300	1,800	(130)	1,600	0.26	6,300
	6	5,800	4,500	(330)	4,200	0.65	6,300

While this particular analysis showed that Option 1 for pumps is less cost effective for the refinery models, we note that there appear to be some anomalies in the values themselves. The large chemical manufacturing model (Model 3) and the small refinery model (Model 5) have a similar number of pumps, and the annualized costs (without VOC recovery credits) for these models is also very similar. However, the VOC recovery credit and VOC emissions reductions per year for Model 3 are over 3.5 times higher than those for Model 5. This trend is due to the fact that the calculated emissions factors for refinery pumps in this analysis range from about 2 to 5 times lower than the emissions factors for chemical manufacturing pumps. Part of that difference is expected and is due to the differences in the emissions equations in the *Protocol for Equipment Leak Emission Estimates* (EPA–453/R–95–017, November 1995). However, part of the difference is also due to the assumed distribution of leaking pumps in each sector. The distribution of leaking pumps at refineries was based on a study of quarterly monitoring of pumps in the 1990s (*Analysis of Refinery Screening Data,* prepared by Hal Taback Company for API, November 1997). It is possible that monthly monitoring data or data collected more recently would result in a different cost-effectiveness value for refinery pumps.

In Option 2 for pumps, we considered further lowering the leak definition for pumps in light liquid service to 500 ppm. The leak definition of 500 ppm for pumps appears in a few consent decrees. However, we estimated a significantly higher incremental cost to reduce a ton of VOC emissions for all of the models compared to Option 1 for pumps. Table 14 of this preamble shows the incremental costs and VOC emissions reductions of lowering the leak definition from 2,000 ppm (Option 1 for pumps) to 500 ppm for pumps in light liquid service.

TABLE 14—MODEL PLANT COSTS AND VOC EMISSIONS REDUCTION ESTIMATES FOR OPTION 2 FOR PUMPS (LEAK DEFINITION OF 500 PPM) INCREMENTAL TO OPTION 1 FOR PUMPS

Model		Capital costs ($)	Annualized costs without recovery credits ($)	VOC recovery credit ($)	Total annualized costs ($)	VOC emissions Reduction (tpy)	Overall cost effectiveness ($/ton VOC)
Chemical Manufacturing Models	1	1,000	370	(12)	350	0.024	15,000
	2	2,700	980	(32)	940	0.063	15,000
	3	3,700	1,400	(44)	1,300	0.088	15,000
Petroleum Refinery Models	4	140	440	(0.15)	440	0.00031	1,400,000
	5	1,200	3,800	(1.3)	3,800	0.0026	1,400,000
	6	3,000	9,600	(3.4)	9,600	0.0067	1,400,000

In Option 1 for connectors, we considered the impact of adding instrument monitoring for connectors in gas and vapor service and connectors in light liquid service as in Level 2 EL Generic MACT. In this option, the leak definition is 500 ppm. Connectors are monitored annually, but similar to valves, there are provisions for less frequent monitoring if the connectors meet certain conditions. When we evaluated the costs and emission reduction impacts relative to the number of connectors in the models, we again noticed that the option was more cost effective for models with the most connectors. Again, this trend is due to the fact that the number of hours spent on administrative activities and preparing reports is fixed regardless of the number of connectors. Table 15 of this preamble shows the incremental costs and VOC emissions reductions (from baseline) of requiring monitoring of connectors in gas and vapor service and connectors in light liquid service at a leak definition of 500 ppm.

TABLE 15—MODEL PLANT COSTS AND VOC EMISSIONS REDUCTION ESTIMATES FOR OPTION 1 FOR CONNECTORS (LEAK DEFINITION OF 500 PPM) INCREMENTAL TO BASELINE

Model		Capital costs ($)	Annualized costs without recovery credits ($)	VOC recovery credit ($)	Total annualized costs ($)	VOC emissions reduction (tpy)	Overall cost effectiveness ($/ton VOC)
Chemical Manufacturing Models	1	19,000	7,900	(510)	7,400	1.0	7,200
	2	66,000	16,000	(1,900)	14,000	3.7	3,700
	3	180,000	35,000	(5,200)	30,000	10	2,900
Petroleum Refinery Models	4	19,000	7,900	(200)	7,700	0.41	19,000
	5	170,000	34,000	(2,000)	32,000	4.0	8,000
	6	520,000	93,000	(6,100)	87,000	12	7,200

We also considered annual instrument monitoring for open-ended valves and lines. The requirement in nearly all equipment leak standards to equip open-ended valves and lines with a cap, blind flange, plug or a second valve is intended to essentially eliminate emissions from open-ended valves and lines. However, as we noted when we proposed amendments to NSPS VV (71 FR 65302, November 7, 2006), inspections conducted by enforcement agencies have found that many of these closure devices are leaking due to improper installation. Therefore, some states have begun to require instrument monitoring of open-ended valves and lines in addition to requiring a cap, blind flange, plug or a second valve. For example, in the Houston/Galveston/Brazoria area of

Texas, petroleum refining and SOCMI process units in which a highly-reactive volatile organic compound (HRVOC) is a raw material, intermediate, final product or in a waste stream are subject to the requirements of part 30, chapter 115, subchapter H, division 3 of the Texas Administrative Code. One of those requirements is quarterly monitoring of blind flanges, caps or plugs at the end of a pipe or line containing HRVOC and repair of leaks above 500 ppm (30 TAC 115.781(b)(3)). If the open-ended line is used for sampling of the process fluid and the cap, blind flange, plug or second valve is opened, then the instrument monitoring indicates whether the cap, blind flange, plug or second valve was re-closed properly after sampling. The monitoring will also indicate whether the open-ended valve is leaking.

We considered the cost of instrument monitoring for open-ended valves and lines separately from the other options in this analysis. Since the cap, blind flange, plug or a second valve is required to seal the open-ended valve or line and eliminate emissions, we do not expect that monitoring would achieve any additional emissions reduction. Rather, the instrument monitoring would ensure compliance with the requirement that the cap, blind flange, plug or second valve seal the open-ended valve or line. The nationwide cost of these monitors would be incorporated into the estimate of monitoring, recordkeeping and reporting burden for the referencing subpart. The costs for the model plants ranged from a capital cost of $810 and an annualized cost of $180 for the simple chemical manufacturing model to a capital cost of $23,000 and an annualized cost of $5,400 for the complex refinery model.

Similarly, we also estimated the costs of requiring electronic monitoring of PRD. This analysis was conducted separately from the options listed above because installation of electronic monitors is not expected to achieve additional emissions reductions. Rather, the electronic monitors would be used to notify operators when there is a pressure release and aid them in ensuring compliance with the requirement that there be no releases from the PRD. The nationwide cost of these monitors would be incorporated into the estimate of monitoring, recordkeeping and reporting burden for the referencing subpart. The costs for the model plants ranged from a capital cost of $11,000 and an annualized cost of $1,600 for the simple chemical manufacturing model to a capital cost of $130,000 and an annualized cost of $19,000 for the complex refinery model. We note that the requirement to install this type of monitor would only apply if a referencing subpart specifically referenced this section.

2. How did the EPA develop the proposed regulations based on the analysis of regulatory options?

The analysis of regulatory options described in section IV.B.1 of this preamble provided us with the information needed to determine the appropriate level of stringency for the requirements for the Uniform Standards for equipment leaks from valves, pumps and connectors. The next step was to determine the details for the proposed requirements, as well as determine what other provisions were appropriate to propose as part of the Uniform Standards. Rather than developing all-new regulatory language to describe these requirements, we reviewed the language provided in current equipment leaks regulations. We elected to use the Level 2 EL Generic MACT (40 CFR part 63, subpart UU) as a starting point for developing the Uniform Standards for equipment leaks. We determined that, as one of the most recently promulgated standards for equipment leaks, the Level 2 EL Generic MACT includes many of the provisions that we determined through the analysis described in section VI.B.I of this preamble are the appropriate level of control for the Uniform Standards. In addition, the Level 2 EL Generic MACT was already organized to be referenced from source category-specific subparts. The major overarching change that we made to the format of the Level 2 EL Generic MACT was to rearrange and rephrase all of the provisions to be consistent with our most recent ''plain English'' regulations.

We note that the Level 2 EL Generic MACT specifies certain types of equipment that are not subject to any of the requirements of that rule, such as equipment in lines with no process fluids. We have elected not to propose this specific provision in 40 CFR part 65, subpart J. Rather, we are proposing the requirements for detecting and repairing leaks in subpart J, and we expect that the referencing subpart will define clearly what equipment must comply with subpart J. Similarly, we are not proposing that equipment in vacuum service would be exempt from subpart J; instead, we are proposing the monitoring and recordkeeping requirements described in section IV.A.3 and section IV.B.5 of this preamble.

We also note that when reviewing the various equipment leak regulations, we noticed that while the requirements themselves are similar, the regulations are not consistent in defining a leak that must be repaired. As a specific example, the Level 2 EL Generic MACT specifies how to handle indications of liquids dripping that you find during a visual pump inspection, but it does not specifically say that indications of liquids dripping is a leak. Conversely, NSPS VVa specifically states that indications of liquids dripping is a leak and that removing the indications of liquids dripping is considered repair (although you are not required to conduct instrument monitoring to confirm repair in that case).

We believe that the standards are clearer if ''repair'' is defined based on the detection method used to identify the potential leak or leak. For example, for a leak detected using instrument monitoring, repair requires instrument monitoring to confirm that there is no longer a leak, while indications of a potential leak detected using sensory monitoring are considered repaired once you adjust or alter the equipment to eliminate the indications of a potential leak. Therefore, we are proposing in 40 CFR part 65, subpart H that ''repaired'' has different, specific meanings, depending on how the leak or potential leak is detected. We note that if you observe indications of a potential leak (*e.g.,* liquids dripping) during sensory monitoring and you elect to confirm the presence of a leak through instrument monitoring, you would be required to repair the leak only based on the instrument monitoring definition of ''repair'' (*i.e.,* not also based on the sensory monitoring definition of ''repair''). Although the Level 2 EL Generic MACT interpretation and language is different from the interpretation in NSPS VVa, we note that the substance of the proposed requirements is essentially the same as both these current rules.

We are clarifying in this preamble that the proposed option to maintain certain types of equipment (e.g., such as compressors, PRD, open-ended valves and lines, and equipment in closed vent systems and fuel gas systems) below 500 ppm above background is considered a performance standard and not a leak definition indicating a leak requiring repair. Therefore, the instrument monitoring that we are proposing for those types of equipment is to confirm that the performance standard is being met; it is not instrument monitoring to detect a leak. Additional details regarding these proposed requirements are provided in the equipment-specific paragraphs in section IV.B.4 of this preamble.

As we reviewed the regulatory language of current equipment leak rules, we noticed that the rules include definitions of some types of equipment (*e.g.,* connector, open-ended valve or line) but not others. We request comment on whether we should add definitions of ''valve,'' ''pump,'' ''agitator'' and ''compressor,'' as well as other terms that are used throughout the proposed Uniform Standards, but not defined (*e.g.,* ''dual mechanical seal system''). The intended purpose of adding definitions of these terms to 40 CFR part 65, subpart J, would not be to make the standards more or less stringent than current standards. Rather, the goal is to ensure that the standards are interpreted consistently. Therefore, comments on additional definitions should include proposed language for those definitions and describe how defining the term would result in interpretations that are more consistent.

The following sections describe the rationale for specific proposed provisions.

3. How did the EPA determine that the proposed compliance requirements of sensory monitoring for certain equipment are appropriate?

As we noted in section IV.B.1 of this preamble, most current equipment leaks regulations include requirements for sensory monitoring, as well as instrument monitoring using Method 21 of 40 CFR part 60, appendix A–7. Sensory monitoring has traditionally been required for certain equipment for which it is considered not cost effective to require instrument monitoring, such as equipment in heavy liquid service and equipment that is in use a very short time during the year. Our analysis of emissions reduction techniques showed that sensory monitoring is still necessary and appropriate for certain types of equipment. For the specific types of equipment listed in 40 CFR 65.428, we are proposing to require sensory monitoring equivalent to the monitoring required in the Level 2 EL Generic MACT, including equipment in heavy liquid service, equipment in regulated material service less than 300 hr/yr, PRD in light liquid service and instrumentation systems.

The list also includes equipment types that may not be specified in other rules. First, as noted in section IV.B.1 of this preamble, we determined that instrument monitoring at the baseline level (*i.e.,* 10,000 ppm leak definition) is the least cost effective for a plant site with less than 1,500 total pieces of equipment, so we are proposing to require only sensory monitoring for a plant site with less than 1,500 total pieces of equipment. Second, we are proposing to clarify that sensory monitoring is required for connectors in gas and vapor service and connectors in light liquid service if the referencing subpart does not require compliance with the instrument monitoring provisions for connectors (40 CFR 65.422). Third, we determined that sensory monitoring is necessary for any equipment that contains or contacts regulated material, but is not in regulated material service. For example, if a valve contains or contacts a light liquid process fluid with 3-percent regulated material (*i.e.,* less than the amount required to be defined as ''in light liquid service''), instrument monitoring is not cost effective and would not be required. However, if that valve leaks, there are emissions in that release that need to be addressed. We have determined that sensory monitoring is an appropriate standard in that case. Fourth, we are proposing that the list of equipment for which you are required to conduct sensory monitoring includes any equipment for which sensory monitoring is required by a provision in proposed 40 CFR 65.420 through 65.427. Throughout these sections of proposed 40 CFR part 65, subpart J, there are exceptions to the instrument monitoring requirements for specific types of equipment. This proposed requirement will help to ensure operators keep an eye out for these potential leaks without placing undue burden on the operators. The requirement to conduct sensory monitoring for specific types of equipment is discussed throughout the remainder of section IV.B.4 of this preamble. Finally, we are proposing sensory monitoring for other equipment, as required by the referencing subpart. This provision is included partly to provide some flexibility to the referencing subpart in defining the requirements for specific types of equipment (based on source category-specific and subpart-specific analyses) and partly to indicate that sensory monitoring should be the minimum requirement for any equipment not otherwise required to conduct instrument monitoring or meet a performance standard.

The change in format (*i.e.,* specifying types of equipment required to conduct sensory monitoring in one location and referencing one section for LDAR requirements) better indicates that the level of control for all these types of equipment is the same. In some current equipment leak regulations, these requirements are spread throughout the rule with minor variations in language, and it is not clear whether the monitoring and repair requirements are intended to be identical. In addition, as noted above, the change in format more clearly indicates that sensory monitoring is the minimum requirement for all types of equipment for which instrument monitoring is not required. While we expect that sensory monitoring will continue to be specified mostly for equipment in heavy liquid service and instrumentation systems, we recognize that if instrument monitoring is not currently required for other types of equipment in a specific source category, analyses may show that it is not appropriate to begin instrument monitoring in that specific source category. In that case, we wanted to ensure that it is clear that you would, at a minimum, continue conducting sensory monitoring for these pieces of equipment.

4. How did the EPA determine the proposed compliance requirements for specific types of equipment?

Based on the analysis described in section IV.B.1 of this preamble, we are proposing requirements mostly equivalent to the Level 2 EL Generic MACT, as well as instrument monitoring for open-ended valves and lines to ensure compliance with the proposed performance standard. We are also proposing several new requirements for delay of leak repair, including a requirement to install low leak technology when a leaking valve or connector is repaired more than 15 days after detection (*i.e.,* when repair of a leaking valve or connector has been delayed under 40 CFR 65.432(d)). We are also proposing several clarifications (relative to the Level 2 EL Generic MACT) and new requirements that are specific to certain types of equipment. This section includes rationale for those clarifications and requirements, as well as some rationale for requirements that we considered, but are not proposing.

Valves in gas and vapor service and valves in light liquid service. The requirements that we are proposing in 40 CFR 65.420 for valves in gas and vapor service and valves in light liquid service are essentially the same as the Level 2 EL Generic MACT, including the requirement to calculate the percent of valves leaking and the option to subgroup valves for monitoring purposes. The differences between the Level 2 EL Generic MACT and the proposed Uniform Standards are clarifications that are described in this section.

We are proposing to clarify how to determine monitoring frequency for valves in 40 CFR 65.420(a)(2)(i). In the

Level 2 EL Generic MACT, the decision point for the monitoring frequency determinations is expressed in terms such as ''less than the greater of 2 valves or 2 percent of the valves in a process unit.'' For these Uniform Standards, we are proposing language similar to the HON to clarify the terminology for this determination. We are not proposing any changes to the procedure itself. If the number of leaking valves is 2 percent of the valves or higher, you must either monitor monthly or, if the sum of the total valves leaking over the previous two monitoring periods is three or less, you must monitor at least quarterly.

We are also proposing to clarify that the provision for 250 or fewer valves in a process unit in the Level 2 EL Generic MACT is intended to ensure that monthly monitoring is not required and that quarterly is the most frequent monitoring required. Regardless of the number of valves in your process unit, you may monitor valves less frequently than quarterly if the percent leaking calculation qualifies that process unit for less frequent monitoring.

We are proposing to clarify that you are not required to conduct instrument monitoring for valves with a valve mechanism that is not connected to a device that penetrates the valve housing (*e.g.,* most check valves). As we stated in the background information document for NSPS VV (EPA–450/3–83–033a, November 1980), a valve that ''has no stem or subsequent packing gland * * * is not considered to be a potential source of fugitive emissions.'' Therefore, it is not necessary to conduct instrument monitoring to detect leaks, and we consider this proposed provision to be a clarification of our original intent. However, we are proposing to require you to conduct sensory monitoring to ensure that there are no fugitive emissions from other parts of these types of valves.

We are proposing to retain the requirement found in many current equipment leaks rules to limit the number of difficult-to-monitor valves in a new source to less than 3 percent of the valves in that source. The Uniform Standards would not define a new source; a new source would be defined by the referencing subpart. We are also proposing that you would not have to limit the number of difficult-to-monitor valves in a new source (as defined by the referencing subpart) if all of the difficult-to-monitor valves in that new source meet the description of low leak technology (see sections IV.A.4 and IV.B.5 of this preamble). We also considered requiring all valves in a new source to be designed to meet the description of low leak technology (not just those that you designate as difficult-to-monitor), unless it is technically infeasible to do so. If we included that provision in the Uniform Standards, we would consider removing the 3-percent restriction on difficult-to-monitor valves in a new source, since the potential for leaks from all of the valves would be reduced. We request comment on the proposed provision providing the option of designing difficult-to-monitor valves in a new source to meet the description of low leak technology, as well as the idea of requiring all valves in a new source to be designed to meet the description of low leak technology.

Finally, as we noted in section IV.B.1 of this preamble, we evaluated the impacts of lowering the leak definition from 500 ppm to 100 ppm for valves. Based on our analysis, we concluded that for this proposed rule, 500 ppm is the appropriate leak definition for valves. However, we note that our analysis was general and based on assumptions that may not be applicable to all source categories. We expect that when conducting the analysis to determine whether it is appropriate to reference these Uniform Standards from each source category, we will consider the appropriate leak definition for valves in that source category. If the analysis shows that referencing the Uniform Standards would be appropriate with a lower leak definition than 500 ppm for valves, then the referencing subpart could specify that lower leak definition and override the requirements in the Uniform Standards. We request comment and additional data supporting a different leak definition for valves in the Uniform Standard.

Pumps in light liquid service. The requirements that we are proposing in 40 CFR 65.421 for pumps in light liquid service are mostly the same as the Level 2 EL Generic MACT. Section IV.B.1 of this preamble presents the model plant impacts of lowering the leak definition from 10,000 ppm to 2,000 ppm for pumps in light liquid service. We also considered additional information when determining the appropriate level of control to propose. Specifically, data collected through an ICR for petroleum refineries (76 FR 5804, February 2, 2011) indicate that 93 percent of the pumps that are currently monitored for leaks are monitored at a leak definition of 2,000 ppm. We did reorganize the sections slightly and revise the language relative to the Level 2 EL Generic MACT to better indicate the similarity between the provisions for pumps and agitators. Other differences between the Level 2 EL Generic MACT and the proposed Uniform Standards are described in this section.

We are proposing to maintain the leak definition of 5,000 ppm for pumps handling polymerizing monomers. This leak definition was set nearly 20 years ago, during the development of the HON, based on the argument that since mechanical seals cannot be used on pumps handling polymerizing monomers, these pumps cannot achieve a 2,000-ppm leak performance level. We request comment and any available data either to support maintaining the 5,000-ppm leak definition for pumps handling polymerizing monomers or to support lowering the leak definition for pumps handling polymerizing monomers.

We are proposing to include the Level 2 EL Generic MACT requirements for weekly inspections of pumps subject to 40 CFR 65.421, including dual mechanical seal pumps. Like the Level 2 EL Generic MACT, we are proposing that if you find indications of liquids dripping during a weekly inspection, you could choose whether to repair the pump, eliminating those indications of liquids dripping or conduct instrument monitoring to determine if there is a leak. We are proposing to add a requirement that if you choose to repair the pump to eliminate the potential leak rather than conducting instrument monitoring, you would be required to do so before the next weekly inspection. This limit of time is similar to the 5 days allowed to repair equipment subject to sensory monitoring requirements. However, if we required repair within 5 days of detection and the next weekly inspection occurred less than 5 days after the inspection in which you observed the indications of liquids dripping (see the ''reasonable interval'' provisions in the General Provisions), then you would presumably continue to see the indications of liquids dripping that you are already planning to eliminate, and that weekly inspection would not provide any new information. We request comment on the amount of time provided to repair pumps with indications of liquids dripping.

We are also proposing an additional clarification regarding weekly inspections for pumps consistent with NSPS VVa. The aim of an LDAR program is to find and repair leaks. In some instances, the liquids found dripping from pumps are not leaks; for example, the liquids could simply be condensation from the atmosphere. Therefore, we are proposing to clarify in 40 CFR 65.421(c), consistent with NSPS VVa, that if you see liquids dripping during a weekly inspection, you choose to conduct instrument monitoring and

the instrument reading shows that the pump is not leaking, then for subsequent weekly inspections, you would not be required to conduct instrument monitoring when you find indications of liquids dripping, as long as the characteristics of the liquids dripping have not changed since the last weekly inspection. You would continue to conduct the weekly inspection, record the results, and conduct the monthly instrument monitoring, as required in proposed 40 CFR 65.421(a). Note, however, that if you repair the pump, then the clock would ''reset'' regarding the weekly inspections. In other words, if monthly instrument monitoring indicates that a leak has developed, then you would be required to repair the leak, and the next time you notice indications of liquids dripping during a weekly inspection, you would be required to choose whether to repair the potential leak or conduct instrument monitoring to determine if there is a leak.

We note that persistent liquids dripping may indicate an operation problem that should be addressed by maintenance. If indications of liquids dripping are noted for one pump during multiple weekly inspections, we encourage you to ensure that the pump is operating properly.

We are not proposing to require you to implement a quality improvement program (QIP) for pumps. In the Level 2 EL Generic MACT, you are required to implement a QIP if ''at least the greater of either 10 percent of the pumps in a process unit or three pumps'' are leaking. However, evaluation of compliance with current rules that include these provisions has shown that these provisions are complicated and rarely used. We request comment on whether there is need to include QIP provisions for pumps in these Uniform Standards. We also request comment on whether we should substitute the QIP provisions with a similar, but more straightforward requirement. For example, we could include a requirement that if 10 percent of the pumps in a process leak, you would have to replace a certain percentage of those pumps with dual mechanical seal pumps within a set amount of time. A provision like this would achieve similar goals to the QIP, but would be much simpler to understand and implement.

As we noted in section IV.B.1 of this preamble, we evaluated the impacts of lowering the leak definition from 2,000 ppm to 500 ppm for pumps. Based on our analysis, we concluded that for this proposed rule, 2,000 ppm is the appropriate leak definition for pumps. However, as with valves, our analyses were general and were based on assumptions that may not be applicable to all source categories that could reference these Uniform Standards. We expect that when conducting the analysis to determine whether it is appropriate to reference these Uniform Standards from each source category, we will consider the appropriate leak definitions for pumps. If the analysis shows that referencing the Uniform Standards would be appropriate with a lower leak definition for pumps, then the referencing subpart can specify the lower level and override the requirements in the Uniform Standards. We request comment and additional data supporting a different leak definition for pumps in the Uniform Standard.

Connectors in gas and vapor service and connectors in light liquid service. We note that the analysis described in section VI.B.1 of this preamble showed that the cost effectiveness of requiring instrument monitoring for connectors varies widely, depending on the number of connectors in each model. In addition, as noted previously in this section, our analysis was general and based on assumptions that may not be applicable to all source categories. Therefore, it is possible that instrument monitoring of connectors could be more cost effective on a nationwide basis for a source category in which a majority of the affected process units has a large number of connectors. As a result, we determined that the best approach was to include the provisions for instrument monitoring of connectors in the proposed Uniform Standards, but to leave the decision of whether to require instrument monitoring of connectors in gas and vapor service and instrument monitoring of connectors in light liquid service up to the rulemakings for the referencing subparts.

We expect that we will estimate the costs and emissions reduction impacts of the Uniform Standards for each potential referencing subpart. At that time, we will evaluate the necessary factors (including cost effectiveness, if appropriate) and determine whether to require instrument monitoring for connectors. By including the connector monitoring provisions in the Uniform Standards, we can ensure that the instrument monitoring provisions for connectors will be consistent with the instrument monitoring provisions for other equipment in the Uniform Standards if we determine in the future that instrument monitoring of connectors is appropriate for a particular source category.

Therefore, we are proposing that you would conduct instrument monitoring for connectors in gas and vapor service and connectors in light liquid service, as in Level 2 EL Generic MACT, only if required by your referencing subpart. We did rearrange the paragraphs and make small clarifications to the language, but aside from specifying in the Uniform Standards that connector monitoring and repair is required only if specified by your referencing subpart, there are no substantive differences between the connector requirements in the Level 2 EL Generic MACT and the connector requirements proposed in the Uniform Standards. The differences between the Level 2 EL Generic MACT and the proposed Uniform Standards are described in this section. We request comment on whether there are other requirements for connectors that we should consider.

If your referencing subpart does require connector monitoring, we are proposing two requirements to clarify that the connector requirements are analogous to the requirements for valves. First, connector monitoring data generated less than 12 months before a process unit becomes subject to this subpart would be allowed in determining monitoring frequency (as well as counting as the initial monitoring for connectors). Second, the monitoring that you are required to perform after repairing a leaking connector and within 90 days of detecting the leak is not the same monitoring that you must perform to meet the definition of ''repair.''

Finally, we are proposing to limit the types of connectors that can be classified as ''inaccessible'' connectors in 40 CFR 65.416(b). We are not proposing to include connectors that cannot be reached without elevating personnel (as in the Level 2 EL Generic MACT). These connectors would already be classified as difficult-to-monitor connectors under proposed 40 CFR 65.416(a)(2). In addition, we are not specifically including connectors that cannot be accessed at any time in a safe manner to perform monitoring. Instead, we consider these connectors to be classified as unsafe-to-monitor under proposed 40 CFR 65.416(a)(1). See section IV.B.5 of this preamble for additional detail about unsafe-to-monitor and difficult-to-monitor equipment.

Agitators in gas and vapor service and agitators in light liquid service. The requirements that we are proposing in 40 CFR 65.423 for agitators in gas and vapor service and agitators in light liquid service are mostly the same as both the Level 1 EL Generic MACT and

the Level 2 EL Generic MACT. We did reorganize the sections slightly and revise the language relative to the Level 2 EL Generic MACT to indicate more clearly the similarity between the provisions for pumps and agitators. We are also proposing to include the Level 2 EL Generic MACT requirements for weekly inspections of agitators subject to 40 CFR 65.423 with clarifications identical to those described in section IV.B.4 of this preamble for pumps in light liquid service.

Given the similarities between pumps and agitators in design, operation and current regulatory requirements, we considered lowering the leak definition for agitators from 10,000 ppm. However, we do not currently have sufficient data on agitator monitoring to conduct such an analysis. We request comment and additional data supporting either maintaining the leak definition at 10,000 ppm or lowering the leak definition.

PRD. We are proposing to require that all PRD in gas or vapor service be operated with an instrument reading of less than 500 ppm above background. No later than 5 days after the PRD begins operating in regulated material service again following a pressure release, you would be required to conduct instrument monitoring to demonstrate that the PRD is once again in compliance with the requirement to operate with an instrument reading of less than 500 ppm above background. We note that the Level 2 EL Generic MACT includes a similar standard for PRD in gas and vapor service to operate at 500 ppm above background.

In addition, your referencing subpart may specify that no releases are allowed from any PRD, as release events from PRD have the potential to emit large quantities of regulated material. In that case, it is important to identify and control any releases in a timely manner. Therefore, if your referencing subpart specifies that no releases be allowed from your PRD, we are proposing to require you to install electronic indicators on each PRD that would be able to identify and record the time and duration of each pressure release. In addition to ensuring that significant releases are addressed, these requirements will also alert operators to any operational problems with the PRD seal that could be resulting in emissions to the atmosphere. (We are also proposing that if your electronic indicator can measure the concentration of any flow through the PRD, such that it is capable of verifying that the PRD has reseated properly after any release, you would not be required to conduct additional instrument monitoring to verify that the PRD is operating below 500 ppm above background following a pressure release. You would still be required to keep a record of the concentration provided by this monitor to demonstrate that the concentration is less than 500 ppm above background.)

We request comment on the proposed requirements, including whether the PRD in liquid service should be required to meet the 500-ppm performance standard rather than conducting sensory monitoring. We also request comment on other approaches we could take to reduce leaks and manage releases from PRD.

Compressors. We are proposing that compressors either (1) be equipped with a seal system or (2) be maintained at a condition indicated by an instrument reading of less than 500 ppm above background. We did rearrange the paragraphs and make small clarifications to the language, but there are few substantive differences between the compressor requirements in the Level 2 EL Generic MACT and the compressor requirements proposed in the Uniform Standards. One of these differences is for compressors complying with 40 CFR 65.425(a). While the compressor seal is the most likely part of the compressor to leak, it is possible to have small leaks from other parts of the compressor. Therefore, we are requiring sensory monitoring for potential sources of VOC emissions other than the seal system.

As noted in section IV.B.2 of this preamble, we are clarifying that the proposed alternative to maintain compressors at an instrument reading below 500 ppm above background is considered a performance standard. We did consider specifying a time frame for repair if you monitor the compressor and get an instrument reading above 500 ppm. However, we determined that since the instrument reading above 500 ppm is a deviation from the standard and not a leak, we should not allow a set number of days for repair or allow delay of repair. Instead, the deviation for that compressor would be continued until you return the compressor to a condition indicated by an instrument reading less than 500 ppm above background. To encourage you to take action as soon as possible to return the compressor to compliance, we are proposing to require that you must provide in your semiannual periodic report the date of the instrument reading 500 ppm above background or greater and the date of the next instrument reading less than 500 ppm above background (*i.e.,* the number of days that the deviation lasted) for each compressor. We request comment on whether there are other requirements for compressors that we should consider.

Sampling connection systems. We are proposing requirements for sampling connection systems that are similar to NSPS VVa, including arranging the paragraphs of 40 CFR 65.426 for clarity. In addition, we realize that when collecting gas samples, the tubing or pipe between the valves on the sample container and in the closed-loop system will contain process gas. This trapped gas does not need to be collected or captured because it is not a purged process fluid. Therefore, consistent with NSPS VVa, we are specifying that you would not be required to collect or capture gases remaining in the tubing or piping between the closed-purge system valve(s) and sample container valves(s) after the valves are closed and the sample container is disconnected.

We are also proposing to allow you to collect and recycle the purged process fluid to a process, consistent with NSPS VVa. We are proposing to add this option in 40 CFR 65.426(a)(4) for design of the closed-purge, closed-loop or closed vent system because the Level 2 EL Generic MACT requirement to return the purged process fluid ''directly'' to a process line could be interpreted to mean that you could not route the process fluid to a process using any method other than direct piping. We intend that use of the word ''collect'' in this proposed option means the purged fluid should not be allowed to escape. The use of either containers or piping would be an acceptable means of complying with this option. Consistent with the Level 2 EL Generic MACT, we are also proposing to allow you to collect and recycle the purged process fluid to a fuel gas system that meets the requirements of proposed 40 CFR part 65, subpart M.

We are proposing to clarify through the definition of ''sampling connection system'' in proposed 40 CFR 65.295 that lines that convey samples to analyzers and analyzer bypass lines are considered part of sampling connection systems. You would be required to meet the same requirements for the purged process fluid in these lines that you are required to meet for other purged process fluids. We are also clarifying that, for the purposes of this provision, CEMS are not considered analyzers, as they are typically located on stacks and are analyzing emissions rather than process fluids.

Finally, the Level 2 EL Generic MACT includes three options for collecting, storing and transporting purged process fluids, and consistent with NSPS VVa, we are proposing to add two other options in 40 CFR 65.426(a)(4)(iv).

Specifically, we are proposing to allow you to collect, store and transport the purged process fluid to a device used to burn off-specification used oil for energy recovery in accordance with 40 CFR part 279, subpart G, because the combustion operation will result in destruction levels comparable to the other options. We are also proposing to allow you to collect, store and transport the purged process fluid to a waste management unit subject to and operated in compliance with the treatment requirements of 40 CFR 61.348(a) because waste management units meeting the treatment requirements in 40 CFR 61.348(a) and the management requirements in 40 CFR 61.343 through 61.347 must achieve emission suppression and treatment requirements similar to the requirements for group 1 streams in 40 CFR part 63, subpart G, which was already provided as an option in the Level 2 EL Generic MACT.

However, the Level 2 EL Generic MACT includes an exception to the option to collect, store and transport the purged process fluid to a waste management unit that is operated in compliance with the requirements of 40 CFR part 63, subpart G that we are not proposing, consistent with NSPS VVa. Specifically, we are not proposing to allow you to transport purged process fluid that contains regulated material to a waste management unit that has a National Pollution Discharge Elimination System (NPDES) permit instead of to a waste management unit operated in compliance with the requirements of 40 CFR part 63, subpart G, applicable to group 1 wastewater steams because NPDES permits do not require suppression from the wastewater treatment system. Therefore, the emissions from the purged process fluid would not be controlled adequately if we allowed you to send purged process fluid to a waste management unit that has a NPDES permit.

Open-ended valves and lines. Like the Level 2 EL Generic MACT, the proposed requirements for open-ended valves and lines specify that, except in certain situations, each open-ended valve or line shall be equipped with a cap, plug, blind flange or a second valve that seals the open-ended valve or line. As noted in section IV.B.1 of this preamble, inspections conducted by enforcement agencies have found that many of these closure devices are leaking due to factors such as improper installation. Therefore, we are proposing to require annual instrument monitoring of the cap, plug, blind flange or second valve to demonstrate that it seals the open-ended valve or line. An instrument reading of 500 ppm above background or greater would indicate that the open-ended valve or line is not sealed. Similar to the alternative standard for compressors, we did consider specifying a time frame for repair for an instrument reading of 500 ppm above background or greater. However, we determined that, since the instrument reading of 500 ppm above background or greater indicates a deviation from the standard for the cap, plug, blind flange or second valve to seal the open-ended valve or line rather than the presence of a leak, we determined that it would not be appropriate to provide a set number of days for repair or allow delay of repair. Instead, we expect you to take action as soon as possible to properly seal the open-ended valve or line with the cap, plug, blind flange or second valve and obtain an instrument reading less than 500 ppm above background, and we are proposing to require that you must provide in your semiannual periodic report the date of the instrument reading 500 ppm above background or greater and the date of the next instrument reading less than 500 ppm above background (*i.e.,* the number of days the deviation lasted) for each open-ended valve or line. We request comment on the appropriate requirements for open-ended valves and lines, including any additional data either supporting the proposed requirements or demonstrating that we should consider different requirements.

We are proposing to require sensory monitoring for open-ended valves and lines containing materials that would auto catalytically polymerize or would present an explosion, serious overpressure or other safety hazard if capped or equipped with a double block and bleed system. These open-ended valves and lines are exempt from the requirement to install a cap, blind flange, plug or second valve because of the risk of serious overpressure leading to catastrophic failure and, potentially, greater emissions to the atmosphere than if the line is left uncapped. However, we do believe that it is appropriate to require sensory monitoring in this case, as indications of a potential leak from the open-ended valve or line could indicate a leak in the seal of the open-ended valve.

In addition, we are proposing a few clarifications to the definition of ''open-ended valve or line.'' First, we recognize that the literal interpretation of the phrase ''one side of the valve seat in contact with process fluid and one side open to atmosphere, either directly or through open piping'' could lead you to the inaccurate conclusion that once you install a cap, plug, blind flange or second valve on the open-ended valve or line, you no longer have one side of the valve seat open to the atmosphere, so it is no longer an ''open-ended valve or line.'' However, that is not our intended interpretation. Instead, we consider an open-ended valve or line with a cap, plug, blind flange or second valve to be a controlled open-ended valve or line. Therefore, we are proposing to clarify that an open-ended valve or line with a cap, blind flange, plug or second valve on the side that would be otherwise open to the atmosphere is still considered an open-ended valve or line. Second, we are adding the words ''any length of'' to that phrase, so it reads ''or one side open to atmosphere, either directly or through any length of open piping.'' This proposed language clarifies that a valve with one side of the valve seat open to the atmosphere through a very long length of pipe is still considered an open-ended valve or line.

Equipment in closed vent systems and fuel gas systems. Current equipment leak rules are not always consistent regarding regulation of equipment in closed vent systems and fuel gas systems. We expect that closed vent systems and fuel gas systems transport gaseous streams to control devices or combustion devices, respectively, without releases to the atmosphere. Therefore, we are proposing to specify that equipment in closed vent systems and fuel gas systems operate with an instrument reading below 500 ppm above background. Similar to compressors, PRD and open-ended valves and lines, we are proposing to require annual instrument monitoring of the equipment in closed vent systems and fuel gas systems to demonstrate that it operates with an instrument reading below 500 ppm above background. An instrument reading of 500 ppm above background or greater would be a deviation.

Similar to the alternative standard for compressors, we did consider specifying a time frame for repair for an instrument reading of 500 ppm above background or greater. However, we determined that since the instrument reading of 500 ppm above background or greater indicates a deviation from the standard rather than the presence of a leak, we determined that it would not be appropriate to provide a set number of days for repair or allow delay of repair. Instead, we expect you to take action as soon as possible to return the equipment to an instrument reading less than 500 ppm above background. We are proposing to require that you must provide in your semiannual periodic report, the date of

the instrument reading 500 ppm above background or greater and the date of the next instrument reading less than 500 ppm above background (*i.e.,* the number of days that the deviation lasted) for each piece of equipment in a closed vent system or fuel gas system. We request comment on the appropriate requirements for equipment in closed vent systems and fuel gas systems, including data either supporting the proposed requirements or demonstrating that we should consider different requirements.

5. How did the EPA determine the proposed general compliance requirements for equipment leaks?

We are proposing several general clarifications and new requirements that are not specific to certain types of equipment. These clarifications and new requirements are described below.

Equipment in vacuum service. In the Level 2 EL Generic MACT, equipment in vacuum service is exempt from all of the LDAR requirements, including recordkeeping and reporting. In the Uniform Standards, we are proposing to require demonstration that equipment is in vacuum service in 40 CFR 65.416(e), including installation of a pressure gauge and alarm system that will alert an operator immediately and automatically when the pressure is such that the equipment no longer meets the definition of in vacuum service. While we continue to agree that monitoring the equipment in vacuum service for leaks is not necessary, we do find that it is appropriate for you to demonstrate continuously that your equipment is in vacuum service.

Equipment that is unsafe- or difficult-to-monitor. The provisions for equipment that is unsafe- or difficult-to-monitor are largely the same as the Level 2 EL Generic MACT. We are proposing to clarify that equipment of any type for which you are required to conduct instrument monitoring may be designated as unsafe- or difficult-to-monitor if they meet the appropriate conditions in 40 CFR 65.416(a)(1) or (2). The Level 2 EL Generic MACT limited difficult-to-monitor equipment to valves and agitators, and we found no technical feasibility reason that you should not be permitted to designate pumps and connectors as difficult-to-monitor, as well. We are also proposing to clarify that the written monitoring plans required in 40 CFR 65.416(a)(4) must address repair of any leaks you find when you conduct instrument monitoring according to the plan.

Finally, we evaluated the provisions for inaccessible connectors, and we determined that two of the provisions are more appropriately classified as factors that make the connector either difficult-to-monitor or unsafe-to-monitor. In addition, we saw no reason why these provisions should be limited to connectors rather than applicable to all equipment. Therefore, we are proposing to add ''equipment that you cannot access without the use of a motorized man-lift basket in areas where an ignition potential exists'' and ''equipment in near proximity to hazards such as electrical lines'' to the list of examples of unsafe-to-monitor equipment in proposed 40 CFR 65.416(a).

Sensory monitoring. Consistent with the Level 2 EL Generic MACT, if your equipment is subject to sensory monitoring requirements and you find evidence of a potential leak, we are proposing in 40 CFR 65.430(b) that you would be required either to use instrument monitoring to determine if there is a leak needing repair or to repair the equipment, eliminating the evidence of the potential leak. We are also proposing in 40 CFR 65.430(b)(1) to add a limit to the amount of time you would have to repair the equipment (*i.e.,* eliminate the evidence of a potential leak) to 5 days after detection, which is consistent with NSPS VVa.

Monitoring instrument calibration. Consistent with the Level 2 EL Generic MACT, we are proposing that you would calibrate the monitoring instrument with zero air and methane in air. However, we have received information that while methane in air is commonly used to calibrate flame ionization detector (FID)-based instruments, methane is not appropriate for calibrating photo ionization detector (PID)-based instruments. The other calibration gas provided in NSPS VV and NSPS VVa, n-hexane in air, is difficult to find, as 10,000 ppm n-hexane in air is close to the lower explosive limit. Instead, many users of PID-based monitoring instruments use isobutylene as the calibration gas because the response factor of isobutylene is representative of most of the gases they expect to encounter. Therefore, we are proposing to allow isobutylene in air as a calibration gas. Again, consistent with the Level 2 EL Generic MACT, we are proposing that if the instrument does not respond to methane or isobutylene, you may use another compound in air to calibrate the instrument, so the calibration procedures continue to be flexible. We request comment on whether isobutylene in air is an appropriate calibration gas and whether the use of other calibration gases is widespread enough that they should be included.

To ensure that the monitoring results are as accurate as possible, we are also proposing in 40 CFR 65.431(a)(3)(ii) to require a calibration drift assessment similar to the requirements in NSPS VVa. At a minimum, you would be required to perform a calibration drift assessment at the end of each monitoring day. Post-test calibration drift assessments constitute good practice and are a useful quality assurance/quality control (QA/QC) tool to validate the proper operation of the monitor during the monitoring period and, hence, the measurement data. We note that the proposed requirement for a calibration drift assessment is not an effort to make the method more accurate than was originally intended; it is intended as an additional quality assurance check.

As proposed, you would be required to check the instrument with the same calibration gases as before use and calculate the percent difference from the most recent calibration value. If the drift assessment shows a negative drift of more than 10 percent, then you would have to calculate the leak definition adjusted for negative drift and re-monitor all equipment monitored since the last calibration with instrument readings below the applicable leak definition and above the leak definition adjusted for negative drift. For example, if your leak definition is 500 ppm and you calculated the negative drift to be 15 percent, you would calculate the leak definition adjusted for negative drift as 425 ppm, and you would have to re-monitor equipment with instrument readings above 425 ppm and below 500 ppm to confirm that those pieces of equipment are not leaking. If the drift assessment shows a positive drift of more than 10 percent, then you would have the option to re-monitor all equipment monitored since the last calibration with instrument readings above the applicable leak definition and above the leak definition adjusted for positive drift. Using the same example, you would calculate the leak definition adjusted for negative drift as 575 ppm, and you could elect to re-monitor equipment with instrument readings above 500 ppm and below 575 ppm to show that those pieces of equipment are not actually leaking.

Delay of repair. We are proposing a limit on the amount of time you can delay repair of leaking equipment in 40 CFR 65.432(d). We agree that there are times when repair will be technically infeasible without a process unit shutdown, and we are not proposing to require immediate shutdown to accomplish those repairs. However, we are aware that some process units shut

down very infrequently, allowing equipment to continue leaking for many years. Therefore, we are proposing to specify that you may only delay repair up to the end of the next process unit shutdown or up to 5 years after the leak is detected, whichever is sooner. We believe that a limit of no more than 5 years will allow you to schedule repairs during a planned process unit shutdown while preventing repair from being delayed indefinitely. We request comment on the limit of 5 years; for comments supporting a longer amount of time, we request supporting documentation and examples demonstrating why a longer amount of time is necessary.

We are also proposing that if you have a process unit shutdown of longer than 24 hours, planned or unplanned, you would take the time during that shutdown to repair all equipment for which you delayed repair until the next process unit shutdown. We expect that you would purchase the supplies needed to repair the leaks when the leaks are first detected so that you would be prepared to make repairs during an unplanned shutdown. You would not be required to begin making repairs until the shutdown lasts 24 hours, but you would be required to extend the shutdown until all equipment for which you delayed repair until the next shutdown have been repaired. You would not be required to repair leaks detected less than 15 days before the shutdown. While we expect that you would have ordered the supplies needed for repair, they may not arrive in less than 15 days. In addition, the delay of repair requirements are intended for equipment that cannot be repaired in 15 days, so it is not reasonable to expect that you will always know in less than 15 days that a leak cannot be repaired without a process unit shutdown. We request comment on requiring repairs during any shutdown longer than 24 hours.

We are clarifying that you would continue to conduct instrument monitoring on the schedule required by 40 CFR 65.420 through 65.427 while repair of the leak is delayed. The current equipment leaks requirements do not specify clearly that monitoring may be suspended, but we are aware that some owners and operators have interpreted the current regulations to mean that monitoring is not required. However, continuing to conduct instrument monitoring while repair is delayed provides information about the magnitude of the leak during that time. If the leak grows significantly over time, you may determine that it is appropriate to reschedule the next shutdown to repair the leak sooner. You would not be required to report the results of the continued monitoring, but you would be required to keep records of those results. We are also proposing that for a pump or agitator for which you have delayed repair, you may suspend the weekly inspection until the pump or agitator is repaired.

Finally, we are proposing that unless it is technically infeasible for you to do so, when you do repair valves and connectors for which you delayed repair, you must replace leaking valves and connectors with low leak technology (*e.g.,* replacing the valve packing, flange gaskets or the entire valve or connector). While it is not cost effective to require replacement of all equipment at one time, requiring replacement for equipment that cannot be repaired within 15 days would give you time to plan the repair and purchase the necessary supplies or equipment. In addition, experience has shown that these techniques result in a longer period of time before that specific piece of equipment leaks again, so you would have fewer leaks in the process and likely would be able to take advantage of the less frequent monitoring allowed for valves and connectors. In addition, over time, you would be required to conduct fewer repairs, reducing the cost and time necessary to repair leaks. These cost reductions are expected to offset the increases in capital cost associated with the low leak technology (estimated to be about 10 to 35 percent for valves; see the presentation ''Low Leak Valve and Valve Packing Technology (Low-E Valve)'' in Docket ID No. EPA–HQ–OAR–2010–0869).

We recognize that there are situations where replacing the packing, gaskets or entire piece of equipment may not be technically feasible. In that case, you would be required to document the demonstration that such repair was technically infeasible and include the documentation in your annual periodic report. We are proposing that you would be required to evaluate this demonstration each time you delay repair for a piece of equipment. For example, suppose you previously determined that it was technically infeasible to install low leak technology to repair a valve for which you delayed repair. If that valve leaks again in the future and you have to delay repair beyond 15 days again, you would be required to demonstrate that it is still technically infeasible to install low leak technology to repair a valve; you cannot simply refer to your previous determination. We request comment on this proposed requirement, including whether there are other times that we should require installation of low leak technology and whether we should provide specific circumstances for which installation of low leak technology would not be required due to technical infeasibility (and if so, what those circumstances should be).

We note that, as we stated in the preamble to the proposed amendments to NSPS VV (71 FR 65302, November 7, 2006), sealant injection procedures such as drill and tap methods have advanced in recent years to the point that they are a viable on-line repair technique for many leaking valves. Therefore, we are again clarifying in this proposal that if sealant injection procedures such as drill and tap are a technically feasible type of repair for a specific valve, then those procedures should be attempted before you determine that it is necessary to delay repair for that valve.

6. How did the EPA determine the requirements for the alternative compliance options for equipment leaks?

Alternative for batch operations. The proposed requirements for the alternative compliance option for batch operations are essentially the same as the monitoring requirements in 40 CFR 63.1036(c) of the Level 2 EL Generic MACT. The proposed requirements include the option to elect adjusted monitoring frequencies for process units that operate infrequently, but we are also proposing to specify the minimum amount of time, or ''reasonable intervals,'' between monitoring events consistent with NSPS VVa. Section VI.B of this preamble discusses the rationale for including reasonable intervals in these Uniform Standards, and the reasonable intervals are specified in proposed 40 CFR 65.280 (the General Provisions to the Uniform Standards). We request comment on the reasonable intervals specific to the alternative compliance option for batch operations.

Alternative for routing equipment leak emissions to a closed vent system and control device or to a fuel gas system. The Level 2 EL Generic MACT includes exceptions from instrument monitoring or other standards if you route emissions from leaks of certain types of equipment directly to a fuel gas system or to a control device via a closed vent system. We considered including these provisions as a centralized alternative compliance option in the Uniform Standards. However, we believe that these options have limited applicability. For example, only certain types of equipment and seals physically can be routed directly to a closed vent system or fuel gas system. Therefore, we have

elected to provide the provisions where they are the most directly applicable (*i.e.,* with the other monitoring requirements or performance standards for that type of equipment). Specifically, we are proposing that PRD that release through a closed vent system to a control device would not be required to be operated at less than 500 ppm above background because any vapors released with an instrument reading higher than 500 ppm would be controlled by the control device. Similarly, the proposed Uniform Standards provide a compliance option consistent with the Level 2 Generic MACT for dual mechanical seal pumps, dual mechanical seal agitators and compressor seal systems routed to a fuel gas system or through a closed vent system to a control device. If you use a closed vent system and non-flare control device or a fuel gas system to meet the requirements of this subpart, we are proposing that both the closed vent system and non-flare control device or the fuel gas system, as applicable, must comply with the applicable standards of proposed 40 CFR part 65, subpart M. In addition, consistent with the Level 2 Generic MACT, we are specifying that a non-flare control device must reduce regulated material emissions reductions by 95 percent or to an outlet concentration of 20 ppmv and we are requiring a design evaluation or performance test, as specified in proposed 40 CFR part 65, subpart M for the non-flare control device. We are proposing that flares used to comply with the applicable standard meet the requirements of 40 CFR 63.11(b) of subpart A, as well as proposed 40 CFR part 65, subpart M for the closed vent system associated with the flare.

However, we are not proposing the alternative to route equipment leaks from other pumps and agitators to a fuel gas system or through a closed vent system to a control device. Based on our information, we believe the alternative is rarely, if ever, used for these types of equipment. We request comment on specific situations for which this alternative would apply, particularly from any owners and operators complying with a similar alternative under current equipment leak standards.

Alternative for enclosing a process unit and routing equipment leak emissions to a closed vent system and control device. The Level 2 EL Generic MACT includes exceptions from instrument monitoring if you enclose a process unit or portion of a process unit and vent the equipment leak emissions through a closed vent system to a control device. We considered including these provisions as alternative compliance options as part of the Uniform Standards. However, we believe that these options have limited applicability, and we expect that the types of processes an owner or operator might choose to enclose would be limited, based on factors such as the process fluid characteristics (*i.e.,* the owner or operator likely would not elect to enclose all processes at a facility). Therefore, we are not proposing any alternatives or exceptions based on enclosing process units and routing equipment leaks through a closed vent system to a control device. We request comment on this decision, including examples of specific situations in which that alternative would be most likely to apply.

Alternative for routing emissions to the process. We are not proposing specific provisions for routing emissions from equipment leaks to a process. Instead, we are clarifying through this preamble that the line routing the emissions to the process would be considered part of the process and would be required to comply with the otherwise applicable provisions.

Alternative for pressure testing. We are not proposing to include the alternative compliance option for pressure testing that is in the Level 2 EL Generic MACT. Based on the results of comparative testing and observations, we have concerns that the pressure-testing alternative may not be equivalent to the otherwise applicable LDAR requirements. Therefore, we have decided not to include that alternative in these Uniform Standards. If there is a specific source category for which the pressure-testing alternative is appropriate, we expect that the referencing subpart for that source category would include the provisions for that alternative.

Requesting an alternative means of emission limitation. The Level 2 EL Generic MACT includes specific procedures for requesting an alternative means of emission limitation not already included within that subpart. However, the provisions in the Level 2 EL Generic MACT provisions are fairly general, and there is nothing specific to requesting an alternative means of emission limitation for equipment leaks in the provisions. Therefore, after reviewing these provisions, the CAA and the General Provisions to 40 CFR part 60 and 40 CFR part 63, we have decided not to propose those provisions within 40 CFR part 65, subpart J. We are proposing to include provisions within the General Provisions to the Uniform Standards (40 CFR part 65, subpart H) for requesting an alternative means of emission limitation. See section VI.B.11 of this preamble for additional details on these provisions.

7. How did the EPA determine the requirements for using the optical gas imaging device to detect leaks?

As noted in section IV.A.5 of this preamble, we anticipate that for some source categories, specific requirements for using an optical gas imaging device to detect leaks without accompanying instrument monitoring could be an appropriate alternative to the requirements described in section IV.A.4 of this preamble. Therefore, we are proposing to allow the use of optical gas imaging as a standalone technique for detecting equipment leaks in regulated material service. However, as we also noted in section IV.A.5 of this preamble, we believe that this technique is not currently suitable for detection of leaking compounds in all industry sectors, in part, due to the limitation of the number of compounds that can be screened using this technology. Therefore, we are proposing that the provisions for use of an optical gas imaging instrument for leak detection would be allowed as an alternative only if your referencing subpart includes a direct reference to 40 CFR 65.450. We expect that a referencing subpart will include a direct reference to 40 CFR 65.450 only if it is technically feasible for the sources in that source category to follow the protocol proposed in 40 CFR part 60, appendix K. Structuring the requirements in this way ensures that the optical gas imaging techniques are applied consistently over the various source categories, but provides the referencing subpart the flexibility to define clearly when the optical gas imaging provisions may be used.

We are proposing to include a monitoring frequency of bimonthly and a leak detection level of 60 grams per hour in the Uniform Standards that would apply if the referencing subpart allows you to use the optical gas imaging alternative, but does not specify a monitoring frequency and/or leak detection level. We believe that the appropriate monitoring frequency and leak detection level for a given source category is likely to vary depending on the regulated material and other industry-specific factors. However, we currently do not have data to support setting different parameters, so we are proposing to set the levels in the Uniform Standards consistent with the AWP. Unless and until industry-specific and regulated material-specific data can be gathered using the optical gas imaging instrument, it is not reasonable to expect each referencing subpart to set

a source category-specific monitoring frequency and leak detection level. However, if data are available, the referencing subpart can include a specific monitoring frequency and/or leak detection level other than those set in the Uniform Standards.

V. Summary and Rationale for the Proposed 40 CFR Part 65 National Uniform Emission Standards for Control Devices—Subpart M

A. Summary

This section summarizes the requirements proposed under 40 CFR part 65, subpart M in this action. The proposed requirements summarized in this section are based on the EPA's review of current regulations for closed vent systems; control devices used to control process vents from reactors, distillation and other operations, as well as from emissions from storage vessels, transfer and equipment leaks; and fuel gas systems used for air emissions control. These requirements reflect our intent to implement a simplified approach to rulemaking that results in consistent requirements for these emission points across multiple source categories. Subpart M consolidates and simplifies monitoring, recordkeeping and reporting requirements from current NSPS and NESHAP, eliminates duplicative or unnecessarily burdensome requirements and examines advances in control practices and technology that could be considered for control options in future rulemakings.

In section V of this preamble, the term ''we'' refers to the EPA and the term ''you'' refers to owners and operators of sources affected by the proposed standards. Section V.B of this preamble provides our rationale for the proposed requirements in 40 CFR part 65, subpart M. Additionally, ''subpart M'' refers to proposed 40 CFR part 65, Subpart M.

1. What is the purpose of the proposed rule?

The proposed rule specifies requirements for closed vent systems collecting regulated materials from a regulated source under the referencing subpart; control devices that are used to reduce regulated material emissions from emission points affected by a subpart that references the use of subpart M, including small boilers and process heaters, oxidizers, absorbers, adsorbers, condensers, biofilters, fabric filters, sorbent injection and other control devices; and fuel gas systems used to meet the air emission control requirements of a referencing subpart. The owner or operator would use subpart M to comply with emission standards for any emission unit type (*e.g.,* process vents, transfer racks, storage tanks and equipment leaks) for which emissions are routed to a control device or fuel gas system.

2. What are the proposed general requirements for complying with this subpart?

General requirements. Facilities would be subject to some or all of the requirements of subpart M when another subpart references the use of subpart M for air emission control, or when directed by another subpart under the Uniform Standards. You would be required to meet the general provisions applicable to part 65 (*i.e.,* subpart A of 40 CFR part 65) and the general provisions applicable to the referencing subpart (*i.e.,* subpart A of 40 CFR parts 60, 61 or 63).

General requirements for halogenated vent streams. As part of the general requirements for proposed subpart M, you would be required to identify each emission stream as either a halogenated or non-halogenated vent stream for purposes of determining which requirements of subpart M apply to each vent stream.

3. What are the proposed requirements for closed vent systems?

We are proposing to require that all owners and operators using a control device to comply with a referencing subpart meet the requirements for closed vent systems. For a closed vent system that contains bypass lines that can divert the stream away from the control device to the atmosphere, you would be required to either (1) install, maintain and operate a continuous parameter monitoring system (CPMS) for flow that is capable of recording the volume of gas that bypassed the control device and is equipped with an automatic alarm system that will alert an operator immediately when flow is detected in the bypass line, or (2) to secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. You would be required to inspect the seal or closure mechanism at least once per month to verify the valve is maintained in the non-diverting position. Use of a bypass at any time regulated materials are flowing in the closed vent system that results in a release of regulated materials to the atmosphere is considered an emissions standards deviation under the proposed rule.

The closed vent system equipment collecting regulated material from a regulated source would be subject to the applicable requirements of the equipment leak Uniform Standards of proposed 40 CFR part 65, subpart J (see section IV.A of this preamble).

4. What are the proposed monitoring and compliance requirements I must meet for each control device?

Under the proposed requirements, you would be required to conduct continuous monitoring for each boiler, process heater, oxidizer, absorber, adsorber, condenser, sorbent injection, biofilter, fabric filter or other control device used to comply with standards in the referencing subpart. The monitoring, recordkeeping and reporting requirements proposed in subpart M are applicable to all control devices. This includes control devices in series with one another (*e.g.,* an absorber and a thermal oxidizer).

For each of these control devices, you must install a CEMS capable of measuring regulated material in the exhaust stream of the control device or you may elect to install and operate a CPMS, unless disallowed by a referencing subpart. You would be required to establish operating limits for monitored parameters that indicate the control device is meeting the specified emission standard of the referencing subpart. For fabric filters, we are proposing that you equip your fabric filter with a bag leak detection system with a device able to continuously record the output signal from the sensor. Additionally, the bag leak detection system must be equipped with an alarm system that will sound when an increase in PM emissions is detected and which does not sound more than 5 percent of the operating time during a 6-month period; if the alarm sounds more than 5 percent of the operating time during a 6-month period, it is considered a deviation. The proposed rule provides guidance for calculating the alarm time and directs the corrective actions to be taken.

As part of the proposed general monitoring requirements for control devices, CEMS and CPMS must follow the requirements specified in proposed 40 CFR 65.711 and 40 CFR 65.712. For each CEMS used to comply with the referencing subpart, we are proposing that you operate and maintain each CEMS according to the requirements of your CEMS performance evaluation and monitoring plan. We are proposing that you conduct initial and periodic performance evaluations of each CEMS used to comply with the referencing subpart according to this plan. In addition, for each CPMS used to comply with the referencing subpart, we are proposing that you operate and maintain each CPMS according to the requirements of your CPMS monitoring

plan. For each bag leak detection system, you must maintain a CPMS monitoring plan, a corrective action plan and records of any bag leak detection alarm, as described in proposed 40 CFR 65.724.

All CPMS would be required to meet minimum calibration and quality control requirements, as specified in Table 4 of subpart M. For each monitored parameter, you would establish an operating limit, pursuant to the requirements of proposed 40 CFR 65.713. Table 3 of subpart M specifies the operating parameters, operating limits and data monitoring, recordkeeping and compliance frequencies for each type of control device covered by proposed subpart M. Tables 1 and 2 of subpart M specify the monitoring equipment requirements when using CEMS and CPMS. You would be required to keep monitoring system records for your CEMS or CPMS, as specified in proposed 40 CFR 65.860. Additionally, you would be required to meet the control device-specific monitoring requirements in proposed 40 CFR 65.724 through 65.800 for the specific control measure(s) being used.

In addition to monitoring, we are proposing that for each control device, you must conduct a performance test to determine compliance with the referencing subpart unless you meet the exemptions specified in proposed 40 CFR 65.702(e). You must conduct the performance test for each control device according to the requirements of proposed 40 CFR 65.820 through 65.829 (see section V.A.7 of this preamble). For fabric filters, you would be required to conduct a performance evaluation consistent with the *Fabric Filter Bag Leak Detection Guidance* (EPA–454/R–98–015, September 1997, incorporated by reference). As a burden reduction for existing regulated sources transitioning to the Uniform Standards, we are not requiring performance tests for which a previous performance test report has been submitted, if the performance test was conducted within the last 5 years and was conducted as specified in proposed subpart M. We note that some transitioning sources may be required to conduct a performance test in cases where new parameter monitoring is required (*e.g.,* carbon absorbers). We anticipate that the referencing subpart will specify, as appropriate for the individual source category, if a new performance test is required or if a prior performance test will satisfy the requirement.

Owners or operators using a fuel gas system to comply with the requirements of the referencing subpart would be required to submit a statement that the emission stream is connected to the fuel gas system in the Notification of Compliance Status Report. Fuel gas systems used to meet air emissions control would be subject to the applicable proposed equipment leak Uniform Standards of 40 CFR part 65, subpart J (see section IV.A of this preamble) as they apply to the individual equipment components comprising the fuel gas system. These requirements include specific instrument monitoring requirements for equipment in gas and vapor service and equipment in light liquid service, and specific sensory monitoring requirements for equipment in heavy liquid service and other equipment that meets certain criteria. You would also be required to meet the control device provisions in proposed 40 CFR 65.724 for small boilers and process heaters that are a part of the fuel gas system if regulated material is routed to the fuel gas system for control.

For each small boiler or process heater, thermal oxidizer, catalytic oxidizer, absorber, adsorber, condenser, biofilter, sorbent injection system or other control device used to comply with the referencing subpart, you would be required to keep the records described in section V.A.8 of this preamble.

5. What are the performance testing requirements?

The performance testing requirements for subpart M are included in proposed 40 CFR 65.820 through 65.829. Proposed 40 CFR 65.820 provides requirements for notification, development and submittal of a performance test plan, and specifies the ''performance testing facilities'' that must be provided by owners and operators required to conduct a performance test (see proposed 40 CFR 65.820(d)).

For each control device controlling regulated materials for which a performance test is required, the proposed standards specify requirements on how to test vent streams from continuous process operations, batch process operations and combined continuous and batch process operations in proposed 40 CFR 65.821. For continuous process operations, we are proposing that you conduct performance tests during ''maximum representative operating conditions for the process.'' Specifically, we are proposing that you must operate your process during the performance test in such a way that results in the most challenging condition for the control device. The most challenging condition for the control device may include, but is not limited to, the highest HAP mass loading rate to the control device, or the highest HAP mass loading rate of constituents that approach the limits of solubility for scrubbing media.

For batch process operations, performance tests must be conducted at absolute worst-case conditions or hypothetical worst-case conditions. The proposed standards define the criteria for selecting the absolute worst-case and hypothetical worst-case conditions in 40 CFR 65.822 (see section V.B.6 of this preamble). We are also proposing that you develop an emissions profile that would describe the characteristics of the vent stream at the inlet to the control device under those absolute or hypothetical worst-case conditions you selected. You would then be required to control and achieve the emission limit prescribed under the referencing subpart, and conduct your performance tests for those periods of worst-case conditions you selected (see section V.B.6 of this preamble).

For combined continuous and batch process operations, you must conduct performance tests when the batch process operations are operating at absolute worst-case conditions or hypothetical worst-case conditions, and the continuous operations are operating at the maximum representative operating conditions for the process.

Table 5 to proposed subpart M specifies the applicable test methods and procedures for each test run, based on the type of emission limit specified in the referencing subpart. As discussed in section II.E of this preamble, we anticipate that the referencing subpart will establish the emission limit that best represents the level of control needed for the source category. The referencing subpart would provide rationale for the format and units of measure for each limit, or, if applicable, rationale for the use of a surrogate in cases where methods for a specific pollutant are insufficient.

We are proposing that if you make a change to process equipment or operating conditions that would affect the operating parameter values of a control device and render the operating limits ineffective as indicators of compliance with the standard, you must conduct a performance test within 180 days of the date of startup of the change to establish new operating limits and demonstrate that you are in compliance with the applicable emission limit of the referencing subpart.

We have included additional requirements for performance testing, including sampling, duration and calculations for determining compliance

in proposed 40 CFR 65.823 through 65.829.

6. What are the additional requirements for batch process operations?

In proposed 40 CFR 65.835, we have included a method for demonstrating compliance with an aggregated percent reduction emission standard. These requirements apply when a referencing subpart allows the owner or operator to show compliance with a percent reduction by aggregating emissions over the full batch process. To demonstrate compliance, the owner or operator would use the proposed engineering evaluation methodologies to calculate uncontrolled emissions from all batch process operations for a given process that they do not want to control. The owner or operator would still determine, through performance testing, uncontrolled and controlled emissions from batch process operations that are controlled. All emissions from all batch process operations (*i.e.,* those emissions determined from the proposed engineering evaluation methodologies and those emissions determined from performance testing) would then be considered when determining compliance with the percent reduction emission limit.

In addition, we are proposing that you use these engineering evaluation methodologies if you choose to develop an emissions profile by process for determining absolute worst-case conditions of your batch process operations. You would also use these methodologies as part of your condenser design evaluation (see the specific condenser section of section V.B.3 of this preamble).

7. How can I demonstrate compliance through design evaluation?

Except for condensers, under the proposed standards, you may demonstrate compliance for a non-flare control device by conducting a design evaluation in lieu of a performance test, if allowed by the referencing subpart. The design evaluation would require documentation that the control device being used achieves the emission limit required by the referencing subpart. For condensers, we are proposing that you must conduct a design evaluation (see section V.B.3 of this preamble). The evaluation must also include documentation of the composition of the vent stream entering each control device, including flow, regulated material concentration and other site-specific information for each control device, as provided in proposed 40 CFR 65.850. If you choose to do a design evaluation, you would also submit a monitoring description with the Notification of Compliance Status. The monitoring description would contain a description of the parameters to be monitored and the associated operating limit(s), an explanation of the criteria used for selection of that parameter (or parameters) and the operating limit(s), the frequency with which monitoring will be performed, and the averaging time for each operating parameter being measured. Once the design evaluation has been conducted and operating parameters have been established, the non-flare control device must be operated and maintained such that the monitored parameters remain within the established operating limit.

8. What are the recordkeeping, notification and reporting requirements?

We are proposing that each owner or operator of the affected control device must keep the records in proposed 40 CFR 65.860. These include:

- Continuous records of the monitoring equipment operating parameters or emissions. If certain requirements are met, you have the option of maintaining a record of each measured value, or block hourly average data and the most recent three valid hours of continuous records.
- Records of the daily average value or operating block average value of each continuously monitored parameter or emissions for each operating day.
- Non-continuous records as specified in 40 CFR 65.860(b).
- Records of each operating scenario, each emission episode, and each emission profile you develop as described in proposed 40 CFR 65.860(f) for batch operations.
- Control device monitoring, calibration and maintenance records.
- Records of periods when the regulated source, control equipment or CPMS are out of control, inoperative or are not operating properly.
- For batch process operations, records of whether each batch operation was considered a standard batch, including estimated uncontrolled and controlled emissions for each nonstandard batch.
- Performance test records for each performance test performed, as described in proposed 40 CFR 65.820 through 65.829 (and discussed further in section V.A.7 of this preamble). For control devices for which a performance test is required, you would be required to keep records of the percent reduction of regulated material achieved by the control device or the concentration of regulated material at the outlet of the control device, as applicable.

You would be required to submit the reports in proposed 40 CFR 65.880, 65.882, 65.883 and 65.884; certain reports must be submitted electronically, as specified in the proposed 40 CFR part 65, subpart H (see section II.F and VI.B.7 of this preamble). As specified in proposed 40 CFR 65.880, you would be required to submit the Notification of Compliance Status by the date provided by the referencing subpart. The Notification of Compliance Status would require certifications of compliance with rule requirements, including batch calculations and design evaluation records. The report would also include the established operating limit for each monitored parameter. For halogenated vent streams, you would be required to identify any halogenated vent streams as part of the Notification of Compliance Status. The Notification of Compliance Status would also include a statement about any emissions being routed to a fuel gas system. For existing control devices that may be redirected to the Uniform Standards as current regulations are revised, you would also be required to submit a Notification of Compliance Status. However, in order to reduce burden for transitioning sources, we are providing that you would be allowed to rely on previous performance test reports as part of the submittal, as long as the performance test was conducted within the past 5 years and conducted as specified under proposed subpart M. As discussed in section V.A.4 of this preamble, some transitioning sources may be required to conduct a performance test in cases where new parameter monitoring is required.

You would be required to submit semi-annual and annual periodic reports according to the requirements in proposed 40 CFR 65.882 and 65.883. Generally, semi-annual reporting of deviations is required to submit electronically, and annual reporting of non-deviation elements is required to be submitted in hard copy, as discussed under *Types of reports* in section VI.B.7 of this preamble. We are proposing, under 40 CFR 65.884, that you submit certain reports at varying times, based on the activity being reported, including a notification of the performance test, any application to substitute a prior performance test for an initial performance test, a CEMS performance evaluation notification or CPMS monitoring plan submittal, a batch pre-compliance report and certain information, if you chose to use a control device other than those listed in this subpart.

9. When must I comply with the proposed standards?

We are not proposing to specify a compliance timeline in subpart M, so the compliance timeline specified in the referencing subpart would apply for that source category.

B. Rationale

This section provides rationale for the proposed compliance requirements for vent streams that are routed to fuel gas systems or through closed vent systems to control devices. Rationale for the associated monitoring, performance testing, reporting and recordkeeping requirements is also included.

In keeping with our intent to provide a smarter, streamlined process for rulemaking and ensure consistent standards across multiple source categories, we have structured the National Uniform Emission Standards for Control Devices to provide a common set of monitoring, testing, recordkeeping and reporting requirements that may be referenced from multiple regulations, including NSPS and NESHAP. The proposed Uniform Standards in 40 CFR part 65, subpart M are generally based on a review of the Generic MACT standards of 40 CFR part 63, subpart SS. Additionally, we reviewed other recent rules, the applicability determination index database, test reports and recent EPA decisions to identify advances in control technologies, monitoring and compliance approaches. This is in keeping with our intent that the proposed National Uniform Emission Standards for Control Devices would provide a set of supporting requirements that could be considered in future rulemakings under CAA section 111 and 112 to meet the applicable statutory requirements.

The requirements for 40 CFR part 63, subpart SS were chosen as the best starting point for these proposed standards because they were previously developed for the purpose of providing consistent control device requirements that could be referenced by multiple NESHAP subparts, and they already incorporate some improvements based on the EPA's experience with implementation of other subparts, such as the MON (71 FR 40333, issued on July 14, 2006) and the HON (59 FR 19402, issued on April 22, 1994). We have augmented the subpart SS provisions by adding requirements from other subparts to provide additional continuous monitoring options, to better accommodate batch processes and to provide requirements for additional regulated materials (*e.g.,* metals, PM) and types of control devices (e.g., fabric filters, sorbent injection) not covered by subpart SS.

We have developed the Uniform Standards for Control Devices to create a set of requirements that will ensure continuous compliance with the standards established under a referencing subpart. In developing the proposed requirements, we had the opportunity to review typical compliance methods for control devices controlling vent streams from regulations representing a variety of source categories. From this review, we considered the variation in requirements between rules and identified the most effective requirements for each control device. As such, we are proposing subpart M with more stringent requirements than may currently apply to some source categories; however, this stringency can always be overridden by the referencing subpart if deemed appropriate for the particular source category. These more stringent requirements reflect our intention to provide a consistent set of monitoring, recordkeeping and reporting requirements that reflect the most current control technologies and that are accessible and applicable for the majority of source categories complying with MACT and that would potentially reference the Uniform Standards to meet MACT. These consistent standards, if promulgated, will reduce the current overlapping and inconsistent provisions from multiple NSPS and NESHAP that may apply to a single source into a single set of requirements, thereby reducing the compliance burden for sources and government alike. Providing this common set of requirements also circumvents any undue burden on a single source category (for instance, source categories currently subject to multiple regulations). Furthermore, this approach would reduce the number of requests for alternative monitoring requirements, which are frequently made by sources required to comply with multiple NESHAP and NSPS. The proposed Uniform Standards for Control Devices also provide some additional requirements in places that we discovered, through our regulatory survey, were not adequately addressed by current regulations (*e.g.*, we have included provisions for regenerative carbon absorbers that specify how the source should handle desorbed contaminants). We note that the referencing subpart establishes the applicability of the Uniform Standards for Control Devices and the specific provisions of subpart M that may apply; therefore, a referencing subpart may structure more or less stringent requirements for a given source category as is best determined to meet MACT, GACT, AMOS or BSER. (See *Relationship to Referencing Subpart* below.)

In keeping with the objectives of Executive Order 13563, *Improving Regulation and Regulatory Review,* we have also incorporated changes to simplify and streamline the language, improve consistency, incorporate the latest technical requirements and remove unnecessary regulatory burden to create the National Uniform Emission Standards for Control Devices. We believe that these improvements will result in a consistent, yet flexible set of standards that may be easily referenced by multiple source categories in CAA section 111 and 112 rulemakings, resulting in a more efficient regulatory process that will benefit both regulated entities and government agencies. Throughout this section, we will describe the rationale for each major proposed change from the previous rules.

Relationship to Referencing Subpart. In contrast to the Uniform Standards for Storage Vessels and Transfer Operations and the Uniform Standards for Equipment Leaks, the proposed subpart M does not establish applicability thresholds or control levels that may be relied upon by a referencing subpart. Rather, subpart M requires that the referencing subpart establish all applicability, including thresholds or tiers. We have developed subpart M without these types of thresholds because there is a greater variety of emission streams expected to be controlled under subpart M. Storage tanks and equipment leaks are generally controlled on a unit level, with a standard configuration, and the emissions mechanism by which pollutants are released to the atmosphere from these emission points is generally limited. In general, these emissions points are single points that, individually, do not represent large emission sources, and that all behave similarly. Therefore, control of emissions from these points has historically been homogenous with applicability thresholds and control levels that are easily set; storage tanks, for instance, have historically been controlled using preventative maintenance practices, while emissions from equipment leaks have been historically controlled by LDAR requirements.

Conversely, subpart M provides requirements for control devices that may control a variety of emission

streams with various configurations, flow and concentrations. It is possible for multiple process streams throughout a facility to be joined with and directed to a single control device in numerous configurations, combining emissions in one stream for control of a very large emission source. Furthermore, the number of vents to a control device may vary greatly across source categories; some source categories may reflect a standard configuration in which the process streams require multiple control devices; other source categories may reflect a standard configuration in which a single process stream requires control. Because of the many configurations that exist for individual facilities across multiple source categories, the emissions mechanism for process streams routed to control devices may vary greatly. Therefore, we have determined that the referencing subpart is the best place to determine the applicability threshold or control level for a specific source category, as the referencing subpart may consider the unique configurations, flow and concentration of regulated material within a given process stream or streams.

The Uniform Standards for Control Devices assume that the referencing subpart will establish and provide the rationale for the specific emission limits that best support the source category being regulated. The referencing subpart would address and assign applicability thresholds or control levels for any provisions of the Uniform Standards not cross-referenced by the referencing subpart. The referencing subpart could cross-reference or make exceptions, as necessary, to ensure that the proposed requirements of subpart M are appropriate to the source category. For instance, a referencing subpart with multiple applicability thresholds may only direct to a portion of subpart M for sources meeting one of those thresholds. Additionally, the referencing subpart could determine to not direct to subpart M at all for certain applicability thresholds. For example, a referencing subpart may only require CEMS for streams above a defined threshold.

Organization of Proposed Subpart M. The proposed rule is structured so that the compliance requirements for each control device are provided in separate sections. Each control device section includes the specific requirements for that control device, including monitoring, performance testing, conducting a design evaluation, and recordkeeping and reporting. Specific continuous monitoring requirements for control devices are provided in Tables 1 and 2 of subpart M. We have organized the standards this way to facilitate ease of reading and understanding, to congregate requirements for similar control devices in one place and to remove redundant text. For example, 40 CFR part 63, subpart SS includes a general section for performance testing procedures containing a specific requirement regarding the selection of sampling sites for vent streams introduced with combustion air or as a secondary fuel into certain types of boilers or process heaters. We have moved these requirements, specific only to small boilers and process heaters, to a small boiler and process heater section, which is located in proposed 40 CFR 65.724. Additionally, although subpart SS includes a separate section of requirements for halogenated scrubbers, we have consolidated these provisions with the requirements for absorbers. We reasoned that a halogenated scrubber is a specific type of absorber, and the previous requirements overlapped; combining these requirements reduces redundancy and allows for a streamlined compliance approach.

Because the proposed standards contain general monitoring and performance testing requirements that would be applicable to more than one type of control device, we have included separate sections for general monitoring requirements and performance testing requirements to reduce redundancy across rule sections. We additionally congregated the requirements for the correct operation of CEMS and CPMS, as well as requirements for establishing the operating parameters for each CPMS, into individual sections. In addition to the specific control device section that applies to you, you would comply with these proposed general monitoring requirements, located in 40 CFR 65.710 through 65.712. Likewise, you would comply with the proposed general performance testing requirements in 40 CFR 65.820 through 65.829, which include detailed provisions on the methods required for testing. We have also designated a section for general requirements for performing design evaluations. It is our intent that the proposed standards of subpart M, as organized, will have improved clarity and consistency, which will facilitate both reading and compliance as the standards are referenced in future rulemakings.

General differences between proposed 40 CFR part 65, subpart M and 40 CFR part 63, subpart SS. Although the requirements of subpart M are primarily based on 40 CFR part 63, subpart SS, we revised some of the terminology used in subpart SS to provide clarification and accommodate the broad range of source categories and control devices that could be covered by the proposed standards in the future. The National Uniform Emission Standards for Control Devices are intended to provide a common set of testing, monitoring, recordkeeping and reporting requirements that may be referenced from multiple regulations, including NSPS and NESHAP. Therefore, subparts referencing subpart M may define a range of pollutants and pollutant types (*e.g.,* HAP, criteria pollutants). To accommodate the variety of pollutants and pollutant types that may be regulated under future NSPS and NESHAP, we have used the term ''regulated material'' to mean the pollutant regulated by the referencing subpart. We have also used the term ''oxidizer'' in lieu of ''incinerator'' to refer to control devices such as thermal and catalytic oxidizers in order to differentiate these devices from other regulated incineration units.

We revised some provisions included in 40 CFR part 63, subpart SS that are redundant or unclear, including the ''route to process'' provisions. Subpart SS includes an option to route regulated material emissions from non-process operations (*i.e.,* storage tanks, transfer equipment and equipment leaks) to a process for control. The monitoring, recordkeeping and reporting language from subpart SS for this option is not included in proposed subpart M, as these requirements add unnecessary regulatory burden. The proposed Uniform Standards are consistent with the intent of subpart SS, in that owners and operators will continue to have the flexibility to route vent streams, as necessary, to control releases. However, these emission streams will not be subject to additional monitoring, recordkeeping and reporting if they are simply integrated into the process. We have assumed that vent streams that are routed to a process would be eventually released to the atmosphere through a regulated emissions point (*e.g.,* process operation, wastewater stream, equipment leak, etc.) or incorporated into a product or byproduct. Therefore, these requirements were unclear and unnecessary for the purposes of subpart M. We are soliciting comments on this change, including comment on the assumptions presented in this section. We are also requesting comments on whether some vent streams routed to the process are not released to the atmosphere through a regulated emissions point.

The proposed subpart M does not contain requirements for flares.

Proposed subparts I and J refer to 40 CFR 63.11(b) of subpart A for emissions routed to flares from storage tanks, transfer operations, and leaking equipment. It is anticipated that for process vents controlled by flares, a referencing subpart will reference either 40 CFR 63.11(b) of subpart A or include other provisions that are determined to be applicable for flares used at the source category regulated by the referencing subpart. However, we are in the process of gathering data, reviewing flare research papers and test reports, and investigating operating conditions that may impact the performance of a flare, including situations of over steaming, excess aeration, flame lift off, and high winds. Based on this information, we may in the future propose to add new flare requirements to the Uniform Standards in subpart M, which can be referenced by subparts I and J and referencing subparts.

1. How did the EPA determine the general monitoring requirements and the requirements for CEMS and CPMS?

The general monitoring requirements that we are proposing are modeled after specific requirements from 40 CFR part 63, subpart SS, which were based on monitoring and inspection requirements previously developed by the EPA for use in implementing standards for various chemical industry sources. We are supplementing these requirements by proposing continuous monitoring through the installation and operation of either a CEMS or a CPMS. CEMS have been widely used to demonstrate that air pollution control devices are being operated in a manner that ensures that emission limitations are being met, and recent regulations reflect the increasing use of CEMS as a monitoring device across multiple source categories. However, in evaluating the use of CEMS in multiple NESHAP, we determined that monitoring of individual regulated materials may not be reasonable or technically feasible for certain streams. For instance, CEMS may not be available for certain individual HAP species, or may not be economically feasible for smaller sources. In such cases, parameter monitoring provides an alternative option that ensures the control device is operating consistently and continues to achieve the required emission limits. This also provides a more cost-efficient option for some sources, without reducing compliance. Therefore, in order to create a set of standards that could be applied to a broader range of source categories, we have included requirements for both CEMS and CPMS. During the development of referencing subparts that will direct to the Uniform Standards, we will continue to assess the best monitoring option for a given source category from a technical and economic standpoint. We will provide rationale upon proposal or promulgation as to why CEMS or CPMS would be more appropriate for an individual source category, or whether additional flexibility for industry and reduced burden on smaller sources within an individual source category could be granted by allowing either a CEMS or CPMS to be used. We anticipate that in future regulations, the referencing subpart may even override the monitoring options of the proposed subpart M and require a specific monitoring technique.

We have incorporated and updated the CEMS requirements established in the MON, which were developed in consideration of a combination of monitoring requirements from the HON and Pharmaceuticals Production source categories. We have supplemented these requirements with provisions based on the CEMS-specific requirements of 40 CFR part 63, subpart A. These provisions are consolidated under proposed 40 CFR 65.711 in order to establish a set of similar requirements for CEMS in one place that may more generally apply to sources regulated under 40 CFR part 60, 61 or 63 in future rulemakings.

For CPMS, we selected monitoring equipment criteria for overall system accuracy and compatibility. These requirements, which ensure accuracy in measurements and provide confidence for testing results, were inconsistently provided in previous regulations. When these criteria are not established, there is potential that sources could elect to use very costly CPMS equipment, which is inappropriate or ineffective for measuring certain parameters and, therefore, provides inadequate data for the source category. By applying a consistent set of criteria that applies to multiple source categories, we are improving data accuracy, reducing potential costs and removing undue burden for specific source categories. We are requesting comment on whether the proposed approach for establishing CEMS calibration ranges and assessing performance will adequately ensure the accuracy of the reported average emissions that might include measurements at concentrations above the span value. We are also seeking comments on how owners and operators of CPMS are currently employing quality control and calibration methods. Additionally, we welcome information on the lifetime and degradation of CPMS equipment used to measure temperature, liquid or gas volumetric flow, pH, mass flow, pressure and sorbent injection; and whether a ''sunset period'' for existing CPMS equipment is necessary in cases where the lifetime of the monitoring components is limited.

The requirements for measurement range were selected to ensure that the CPMS could detect and record measurements beyond the normal operating range. We believe that requiring a range of at least 20 percent beyond the normal operating range is reasonable and the minimum measurement range needed to encompass most deviations. Owners and operators may desire to select equipment with even wider ranges if it is likely that measurements beyond 20 percent of the normal operating range will occur. Additionally, we are requiring a resolution of one-half the accuracy requirement or better to ensure that the accuracy of the CPMS can be calculated to at least the minimum number of significant figures for the data accuracy assessment to be meaningful. Selecting a resolution of one-half the required accuracy ensures that measurements made during validation checks can be readily compared to the accuracy requirement. We are soliciting comments on whether the proposed measurement range and accuracy requirements are reasonable and consistent with what is currently being used.

We are proposing calibration and quality control requirements for CPMS to ensure that measured parameter data is accurate to demonstrate compliance with the referencing subpart. These measures, which establish requirements for the design, operation and evaluation of CPMS, are intended to ensure the generation of good quality data both initially and on an ongoing basis and determine that the control device is meeting the required emission limit, as specified in the referencing subpart. The specifications are located in Table 4 to proposed subpart M and would apply if you were to use a temperature, liquid or gas volumetric flow, pH, mass flow, pressure or sorbent injection measurement device to determine compliance with an operating limit. These requirements also reflect the EPA's intention to improve the quality of data collected and disseminated by the agency, which will improve the quality of emission inventories and, as a result, future air quality regulations.

For temperature CPMS, we reviewed rules promulgated under parts 60, 61 and 63 that specify accuracy requirements for temperature. Although there is a wide range of accuracies specified in these rules, the accuracy

required for temperature CPMS associated with high temperature (non-cryogenic) applications, such as thermal oxidizers or boilers, generally ranges from 0.75 to 1.0 percent or from 0.5 degrees Celsius to 2.5 degrees Celsius (0.9 degrees Fahrenheit to 4.5 degrees Fahrenheit). For lower temperature (cryogenic) applications, such as wet scrubbers, the specified percent accuracies often are not as stringent; that is, accuracies are specified as a higher percentage of the measured temperature. The reason for specifying higher-percentage accuracy for lower temperature ranges is to offset the fact that the accuracy percentage applies to a lower value. Our selection of temperature accuracies of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent for non-cryogenic applications, and 2.8 degrees Celsius (5 degrees Fahrenheit) or 2.5 percent for cryogenic applications is consistent with the required accuracies for most standards, and we believe that the accuracies specified in the proposed performance specifications are adequate for ensuring good quality data. In addition, a review of vendor literature indicates that temperature CPMS that satisfy these accuracy requirements are readily available at reasonable costs.

Rules promulgated under parts 60, 61 and 63 that require flow rate monitoring specify flow rate accuracy in terms of percent. For liquid flow rate measurement, these rules generally require accuracies of 5 percent, and rules that require steam flow rate monitoring generally require an accuracy of 10 percent or better. We have revised these performance specifications in the proposed subpart M to require accuracies of 2 percent over the normal range of flow measured. Based on our review of vendor literature, we determined a 2-percent accuracy criterion is appropriate and available. Recognizing the differences in the relative magnitudes and the commonly used units of flow rate measurement for liquids and gases, we have specified in the proposed performance standards separate accuracy criteria for liquid and gas flow rates. For liquid flow rate CPMS, which typically are associated with wet scrubber operation, the minimum accuracy would be 1.9 liters per minute (0.5 gallons per minute) or 2 percent, whichever is greater. For gas flow rate CPMS, which often are used to monitor stack gas flow rate, the proposed performance specifications would require a minimum accuracy of 28 liters per minute (10 cubic feet/minute) or 2 percent, whichever is greater. The relative accuracy criterion of 2 percent was selected because the proposed Uniform Standards have been developed to provide the greatest level of air emissions control that may be required by a referencing subpart. As advancements in technology have improved (and are estimated to continue to improve), we have determined that future rulemakings would require more stringent accuracy requirements, and a 2-percent accuracy criterion is reasonable and achievable for the currently available flow CPMS. We note that these requirements could be revised by the referencing subpart, if a higher or lower accuracy is deemed more appropriate for a specific source category.

Although we have incorporated an accuracy criteria for liquid flow rate and gas flow rate as a percent of flow rate and in units of volumetric flow in proposed subpart M, we have concluded that it would not be reasonable to specify accuracy criteria for mass flow in units of mass flow because of the wide range of flow rates that could be monitored (*e.g.,* carbon injection rate v. rotary kiln raw material feed rate). As discussed above for liquid flow rate and gas flow rate, the 2-percent accuracy criterion is based on our review of vendor literature and is a reasonable and achievable requirement for the currently available mass flow CPMS.

Manufacturer and vendor literature indicates that pH CPMS generally have accuracies of 0.01 to 0.15 pH units. Based largely on the vendor literature, we have decided to require pH CPMS to have accuracies of 0.2 pH units or better. An accuracy of 0.2 pH units should allow most facilities that currently monitor pH to continue using their pH CPMS, provided the CPMS satisfies the other criteria specified in the proposed Uniform Standards for Control Devices.

For pressure monitoring, we reviewed the existing part 60, 61 and 63 rules that require pressure monitoring. These rules also specify a minimum accuracy. The accuracy specified generally is either 0.25 to 0.5 kilopascals (kPa) (1 to 2 inch water column (in. wc)) or 5 percent for pressure drop, and 5 to 15 percent for liquid supply pressure. A review of vendor literature indicates that most pressure transducers are accurate from 0.25 to 1.0 percent, and all but the lowest grade (Grade D) of American National Standards Institute (ANSI)-rated pressure gauges have accuracies better than 5 percent. For the proposed performance specifications for CPMS, we selected an accuracy requirement of 0.12 kPa (0.5 in. wc) or 1.0 percent, whichever is greater. We believe this level of accuracy is appropriate, considering that some control devices operate with pressure drops of less than 1.2 kPa (5 in. wc). This criterion was selected because the proposed Uniform Standards have been developed to provide the greatest level of air emissions control that may be required by a referencing subpart. The one percent criterion is consistent with vendor literature, which indicates that CPMS that are capable of achieving this accuracy are readily available.

For sorbent injection, we are specifying accuracy requirements of within 5 percent of the normal range for the sorbent injection rate, with annual performance evaluations and 3-month visual checks. These requirements are consistent with the accuracy requirements for other CPMS, including the requirements for carrier gas flow rate monitors (a similar type of monitor) in the Standards of Performance for New Sewage Sludge Incineration Units (76 FR 15404, March 21, 2011).

If your operation could be intermittent, we are requiring that you install and operate a flow indicator to identify periods of flow and no flow at the inlet or outlet of the control device. The proposed requirements are necessary to identify periods when monitored parameter or emission readings are not required or erroneous and should not be included in the daily or operating block average values. It is not necessary to monitor a control device during periods when regulated material is not routed to the control, and monitoring data during these times should not be averaged in calculating the daily or operating block average. We are proposing an annual verification check of the flow indicator to ensure that it is correctly identifying periods of no flow. We are not considering the flow indicator to be a CPMS that must meet all the provisions of proposed 40 CFR 65.712.

We are proposing to include monitoring requirements from the General Provisions of parts 60, 61 and 63 in the monitoring sections of subpart M. This places all the applicable requirements associated with monitoring (including quality checks, monitoring plan requirements, calibration, monitoring data reduction, recordkeeping and reporting) in one place and consolidated using consistent terminology. For instance, we are including provisions for a CEMS performance evaluation and monitoring plan and a CPMS monitoring plan (formerly the ''site-specific performance evaluation plan'') from the part 63 General Provisions (40 CFR 63.8) in proposed 40 CFR 65.711 and 65.712,

respectively. Subpart A of 40 CFR part 63 states that a specific subpart will indicate whether the plan must be submitted to the Administrator for approval. In the proposed rule, we are requiring that the plan be sent to the Administrator for approval for sources regulated under parts 60 and 61, as well as 40 CFR part 63. We have determined that a CEMS performance evaluation and monitoring plan or a CPMS monitoring plan, as appropriate, is necessary under subpart M to demonstrate compliance with the emission limits of a referencing subpart. However, the source must comply with the CEMS performance evaluation and monitoring plan or the CPMS monitoring plan upon submitting it to the Administrator. Changes may be necessary when the Administrator completes the review.

2. How did the EPA determine the requirements for closed vent systems?

Under the proposed standards, all closed vent systems would be required to meet the applicable provisions of proposed 40 CFR part 65, subpart J (see section IV.A of this preamble) as they apply to the individual equipment components that comprise the closed vent system. In previous rules, equipment that are in closed vent systems have been subject to annual monitoring and have not been subject to more frequent monitoring. We are proposing these requirements to ensure that a vent stream in regulated material service is properly routed to the closed vent system and delivered to the control device for reduction. The proposed rule also requires you to install and maintain a CPMS for flow through a bypass for each closed vent system bypass line that could divert a vent stream to the atmosphere. The CPMS for flow must be capable of recording the volume of the gas that bypasses the control device and be equipped with an alarm system that will alert an operator immediately and automatically when flow is detected in the bypass. These provisions are to ensure that any flow directed through a bypass is detected and identified by the operator. Alternatively, you may secure the bypass line valve in the non-diverting position with a seal mechanism. For this option, you would be required to inspect the seal or closure mechanism at least once per month to confirm that the valve is in the non-diverting position, or, for a lock-and-key type lock, maintain records that the key has been checked out. If the alarm sounds or if it is determined during the monthly inspection that a bypass has occurred, you would be required to report a deviation and to include an estimate of the resulting emissions of regulated material that bypassed the control device. The EPA's intent is that control devices are not to be bypassed; therefore, use of the bypass at any time to divert a regulated vent stream to the atmosphere would be a deviation from the emissions standards set forth by the referencing subpart.

We have not included requirements from 40 CFR part 63, subpart SS that provided monitoring exclusions for equipment such as PRD, low leg drains, high point bleeds, analyzer vents and open-ended valves or lines needed for safety purposes. This equipment could provide a means of bypassing the control device; therefore, we are proposing bypass monitoring for these devices under subpart M of the proposed standards. It is our intent that analyzer vents should be subject to the control requirements for sampling connection systems in 40 CFR part 63, subpart UU. Additionally, applying the bypass monitoring requirements to PRD, low leg drains, high point bleeds, analyzer vents and open-ended valves or lines are consistent with the District of Columbia Circuit Court's 2008 ruling in *Sierra Club* v. *EPA*, which states that emission standards must apply at all times (see section VI.B.5 of this preamble). For a discussion of the economic and cost impacts of these monitoring requirements, see section VII of this preamble.

Following the guidance of Executive Order 13563, *Improving Regulation and Regulatory Review,* we have not included requirements from 40 CFR part 63, subpart SS that we determined were redundant or an unnecessary burden on sources. For instance, although we are not changing the intent of the requirements from subpart SS, we have not included language providing specific instructions for bypass monitoring for loading arms and PRD at transfer racks; specifically, these provisions required that closed vent systems collecting regulated material from a transfer rack be operated such that regulated material vapors collected at one loading arm would not pass through another loading arm to the atmosphere. For PRD, the requirements prevented the PRD in the transfer rack's closed vent system from opening to the atmosphere during loading. These provisions are equivalently handled under the general bypass monitoring requirements of proposed 40 CFR 65.720(c) for closed vent systems, in which you would be required to prevent diversion of the stream to the atmosphere. Therefore, we are not including specific language associated with bypasses from transfer rack closed vent systems, as this additional language is redundant to the general bypass requirement. The requirement not to bypass remains.

3. How did the EPA determine the proposed compliance requirements for each control device?

For each control device, we are proposing that you meet the continuous monitoring requirements of Table 1 or Table 2 to subpart M. Table 1 to subpart M provides the requirements for facilities who comply with the referencing subpart using CEMS. We have consolidated the specific parametric monitoring requirements for each control device in Table 2 to subpart M to provide the requirements in a simplified, easily referenced format to facilitate compliance.

You must conduct a performance test for each control device according to the requirements of proposed 40 CFR 65.820 through 65.829, unless you meet the general control measures of proposed 40 CFR 65.702(e). A performance test is required because emissions measurement remains the best method to demonstrate initial compliance with regulations and determine control device performance. However, we have made exceptions for: (1) Control devices for which a CEMS is used to monitor the performance, (2) when the referencing subpart allows a design evaluation in lieu of a performance test or (3) if certain provisions have been made for a performance test extension, exemption or waiver. These exemptions allow greater flexibility for referencing subparts and are consistent with our desire to provide workable, consolidated requirements that could apply across multiple source categories.

Small boilers and process heaters. The proposed standards under subpart M include requirements that apply to small boilers and process heaters used to control emissions of regulated materials. *Small boilers and process heaters* are defined in the proposed rule as having a capacity less than 44 megawatts (MW) and a design such that the vent stream is introduced with the combustion air or as a secondary fuel. The capacity threshold and the monitoring, performance testing and recordkeeping and reporting requirements for these units were modeled after 40 CFR 63, subpart SS. We have modified these provisions for the proposed Uniform Standards to provide clarification for requirements that were found to be confusing during the implementation of subpart SS. Under subpart SS, the requirements for boilers and process heaters overlapped

with the requirements for fuel gas systems.

Fuel gas system is defined in 40 CFR part 63, subpart SS broadly as the ''* * * piping * * * that gathers gaseous streams for use as fuel gas in combustion devices. * * *'' Therefore, owners or operators that use a boiler or process heater to combust vent gas could be subject to either the boiler and process heater or the fuel gas system requirements. The testing and monitoring requirements under the control device and fuel gas system provisions of subpart SS are the same for boilers or process heaters larger than 44 MW or which have the vent gas introduced with or as the primary fuel; performance testing and monitoring are not required for vent gas routed to a fuel gas system, a boiler or process heater larger than 44 MW or a boiler or process heater in which the vent gas is introduced as or with the primary fuel. However, under the control device provisions of subpart SS, performance testing and monitoring is required in those situations in which the vent gas is introduced with combustion air or as a secondary fuel into a boiler or process heater smaller than 44 MW. Conversely, if these units (smaller than 44 MW) are part of a fuel gas system, monitoring and testing is not required under subpart SS. We propose to clarify the requirements by differentiating small boilers (less than 44 MW) with vent gas introduced to the boiler with combustion air or as a secondary fuel from larger units and those units with vent gas introduced as or with the primary fuel. Therefore, we have distinguished separate requirements for performance testing and monitoring for small boilers and process heaters under proposed 40 CFR 65.820 through 65.829, with specific parametric monitoring requirements specified in Table 2 of subpart M. Units not considered small boilers or process heaters would be required to meet the requirements of proposed 40 CFR 65.732 for fuel gas systems. The proposed fuel gas system provisions also specify that any small boilers or process heaters that are part of a fuel gas system must meet the requirements of the small boiler and process heater provisions. These changes clarify whether each unit would be subject to the requirements for boilers and process heaters or the requirements for fuel gas systems.

Additionally, we are not incorporating the requirements of 40 CFR 63.988(a)(3), which stipulate that the vent stream from the boiler or oxidizer must be introduced into the flame zone. Although we are preserving the intent of 40 CFR part 63, subpart SS, we have reasoned that this language is superfluous. We are proposing to clarify the definition of small boilers in this category as having a design such that the vent stream is introduced with the combustion air or as a secondary fuel. It is assumed that secondary fuel and combustion air are introduced into the flame zone and, therefore, the vent gas would be introduced into the flame zone.

In the proposed rule, we have not included the exemptions from conducting a performance test or design evaluation included in 40 CFR part 63, subpart SS for small boilers and process heaters which have been issued a final permit under 40 CFR part 270 and comply with the requirements of 40 CFR part 266, subpart H or which have certified compliance with the interim status requirements of 40 CFR part 266, subpart H. It is our expectation that these facilities are no longer subject to the air emissions requirements under the Resource Conservation and Recovery Act permitting rules (other than requirements that pertain during startup, shutdown and malfunction (SSM)); rather, all boilers and oxidizers previously subject to these requirements are now subject to 40 CFR part 63, subpart EEE. We have included a performance test exemption for small boilers or process heaters burning hazardous waste who have certified compliance with the requirements of 40 CFR part 63, subpart EEE by conducting comprehensive performance tests and submitting a Notification of Compliance Status per 40 CFR 63.1207(j) and 63.1210(d), and who comply with these requirements at all times, even when burning non-hazardous waste. Additionally, we have not included the subpart SS provision allowing owners or operators of small boilers and process heaters with a minimum temperature of 760 degrees Celsius and a minimum residence time of 0.5 seconds to omit the rationale for these design parameters in the design evaluation (40 CFR 63.985(b)(1)(i)(B)) documentation. This minimum temperature and residence time does not necessarily ensure a 95- or 98-percent reduction efficiency for all possible emission stream chemical compositions (see technical memorandum, *Design Criteria for Combustion,* in Docket ID No. EPA–HQ–OAR–2010–0868). Because the Uniform Standards are designed to provide requirements for a variety of source categories and emission streams, we are not proposing this exception to design evaluation rationale. Instead, we are proposing that the owner or operator of the small boiler or process heater be required to consider the auto-ignition temperature and the residence time when developing the rationale showing that their small boiler or process heater meets the applicable control efficiency and that their chosen operating parameters and ranges are appropriate. The owner or operator may determine that the appropriate temperature and residence time are 760 degrees Celsius and 0.5 seconds for their process; however, under the proposed rule, they would have to provide the rationale in their design evaluation documentation (see technical memorandum, *Design Criteria for Combustion,* in Docket ID No. EPA–HQ–OAR–2010–0868).

Oxidizers. We are proposing monitoring, recordkeeping and reporting requirements for oxidizers, based on 40 CFR part 63, subpart SS. We are proposing the requirements for thermal oxidizers and catalytic oxidizers in 40 CFR 65.726 and 65.728, respectively; these provisions are included in separate sections for ease of reading and to accommodate the additional monitoring requirements that are necessary to ensure compliance for catalytic oxidizers.

For catalytic oxidizers, we are including sampling, analysis and inspection requirements to ensure that the oxidizer is capable of meeting the required emission limits specified in the referencing subpart. We are including a monitoring method for inlet temperature monitoring, provided the difference between the inlet and outlet temperature of the catalytic bed is less than 10 degrees Celsius. A differential of 10 degrees Celsius was chosen based upon the accuracy requirements of temperature monitoring systems specified in this standard, and the typical operating temperature of a catalytic oxidizer. Allowing for measurement error on both sides of the oxidizer (inlet and outlet), 10 degrees Celsius was determined to be a range within measurement capability. The proposed method would allow you to determine a schedule for sampling and analysis of the catalyst activity, based on the degradation rate of the catalyst. If results from the catalyst sampling and analysis indicate that your catalyst will become inactive within the next 18 months, you would be required to replace the catalyst bed or take other corrective action consistent with the manufacturer's recommendations by 3 months before the catalyst is anticipated to become inactive or within half the time available between receiving the catalyst activity report and when the catalyst is expected to become inactive, whichever is less.

Additionally, you would be required to conduct an annual internal inspection of the catalyst bed. The inspection frequency would increase to semiannual or a more stringent frequency, as specified in proposed 40 CFR 65.728(a)(2)(ii), if any issues are found during the annual inspection that require corrective action. These requirements are based on our survey of the MON and the Miscellaneous Metal Parts and Products Surface Coating NESHAP, which included similar alternatives for monitoring the inlet stream temperature. The MON provided an option for monitoring the inlet stream temperature with the requirement of a 12-month check of the catalyst bed; this option was provided to accommodate emissions streams with low flow or diluted concentrations in which it would not always be possible to achieve a measurable temperature differential.

As determined under the MON, when monitoring only the inlet temperature, a catalyst-activity-level check also is needed. This is because catalyst beds can become poisoned and rendered ineffective without any apparent change in operation. The proposed sampling, analysis and inspection requirements discussed above are modeled after the Miscellaneous Metal Parts and Products Surface Coating NESHAP, which expand on the MON's requirement to conduct a 12-month check of the catalyst bed. We are providing the option to determine the schedule for sampling and analysis based on the degradation of the catalyst to provide flexibility for multiple source categories that may reference the Uniform Standards, while ensuring that catalyst beds are replaced or that other corrective actions are taken in a timely manner. A referencing subpart may determine the specific sampling and analysis schedule, in order to ensure compliance, prevent excessive downtime or avoid unreasonable costs to an individual source category.

We have included this option in subpart M only for sources in which the temperature differential between the inlet and outlet of the catalytic oxidizer during normal operating conditions is less than 10 degrees Celsius. We are not proposing this option for sources with a temperature differential of greater than 10 degrees Celsius because inlet and outlet temperature monitoring is a more accurate method of parameter monitoring and should be used, if possible, to measure the temperature differential.

As discussed for *small boilers and process heaters* in this section, we have not included the design evaluation or performance test exemptions included in 40 CFR part 63, subpart SS for oxidizers that comply with the requirements of 40 CFR part 266, subpart H, but only those oxidizers burning hazardous waste who have certified compliance with the requirements of 40 CFR part 63, subpart EEE. Additionally, as discussed for small boilers and process heaters, we have not included the subpart SS provision allowing oxidizers with a minimum temperature and residence time to omit the rationale documentation for the design evaluation.

Absorbers. In developing the proposed standards for absorbers, we have incorporated the monitoring requirements of 40 CFR part 63, subpart SS and added several monitoring options to accommodate the many absorber designs that may be used. Alternative monitoring approaches for absorbers have been the most commonly requested alternative by industry under current rules. Because of this, we have incorporated multiple monitoring schemes based upon the alternatives approved by the EPA, the different monitoring schemes in various chemical sector rules and support documents prepared by the EPA for the compliance assurance monitoring (CAM) regulation. (See *Technical Guidance Document: Compliance Assurance Monitoring,* August 1998, available at *http://www.epa.gov/ttn/emc/cam.html*.) Furthermore, because halogenated scrubbers are a type of absorber and the monitoring requirements are the same, we have merged the requirements for halogen scrubbers into the proposed standards for absorbers to reduce redundant text. We believe that integrating these additional monitoring options into the proposed standards will reduce the need for owners and operators to request the use of alternative monitoring requirements and for the EPA to review these requests, thereby improving the efficiency of the regulatory process. This is consistent with the objectives of Executive Order 13563, *Improving Regulation and Regulatory Review,* which requires that we periodically review existing regulations to examine ways to improve regulatory efficacy or reduce burden.

We are proposing the installation and operation of either a CEMS or a CPMS, following the requirements in Tables 1 or 2 of proposed subpart M. As discussed in the general monitoring requirements in section V.B.1 of this preamble, we have included provisions for both CPMS and CEMS to accommodate the variety of sources that may be controlled by a referencing subpart.

The most critical parameter for monitoring absorption systems is liquid flow to the absorber, therefore we are requiring liquid flow be monitored for all absorption systems, but have provided an option for monitoring of the liquid-to-gas ratio. Rather than calculating one minimum flow rate at maximum operating conditions that must be continuously adhered to, this alternative provision allows a facility to optimize the liquid flow for varying gas flow rates. By using a liquid-to-gas ratio, sources may save resources by reducing the liquid rate with reductions in gas flow due to periods of lower production rates.

Pressure drop is also a valuable operating parameter to monitor for absorbers. It can signal abnormal column conditions such as plugging, channeling or mal-distribution of the packing. We are proposing that you monitor the pressure drop for all absorbers as long as the normal pressure drop across the absorber is greater than 5 inches of water. If the pressure drop is typically less than 5 inches of water, it is not a sensitive monitor for absorber performance. We have also included a requirement to monitor pH for acid gas absorbers. For non-water absorbers used for VOC control, we are proposing that the chemical strength and flow rate of the chemical must be monitored. Monitoring the oxidation strength and flow rate of the chemical will ensure that enough chemical is being added to the absorber to attain at least the required amount of absorption. For particulate and metal absorbers, if the pressure drop is normally less than 5 inches of water, the owner or operator will have the choice of monitoring the inlet and outlet gas temperature; the specific gravity and outlet gas temperature; or the liquid feed pressure and outlet gas temperature. These monitoring parameters provide information on whether there has been sufficient contact between the liquid and gas.

Similar choices were provided for VOC absorbers if the normal pressure drop across the absorbers is less than 5 inches of water and the scrubbing liquid is water. The source would monitor the inlet and outlet gas temperatures, or the liquid feed pressure and outlet gas temperature.

Adsorbers. We are proposing standards for adsorbers used as control devices, based on the provisions of 40 CFR part 63, subpart SS. We have clarified language in the proposed adsorber requirements in order to develop a more inclusive set of

standards. Specifically, we have revised the former subpart SS requirements for ''carbon adsorbers'' to apply to ''adsorbers,'' and modified the applicability to pertain to adsorbers containing any type of adsorbent such as carbon, zeolite or adsorbing polymers. These proposed standards address many different adsorber configurations existing in service today, including carbon adsorbers; adsorbers that use adsorbing media other than carbon; adsorbers that use vacuum as a regeneration technique; adsorber systems that use steam or other media for regeneration; and adsorbers that are not regenerated on site. These changes allow the proposed requirements to be more broadly referenced in future CAA section 111 and 112 rulemakings and provides additional options for control for multiple source categories. Additionally, this change reduces the need for owners and operators to request the use of alternative adsorbents or monitoring methods and for the EPA to review these requests, thereby eliminating unnecessary regulatory burden to industry and improving the efficiency of the regulatory process.

Many current regulations address carbon adsorber operation, and the proposed rule has been written to address performance issues that have been identified by the EPA in implementing and enforcing these rules. Known performance issues include: The regeneration frequency of the adsorbent; the effectiveness of regeneration; the life of the adsorbent material before replacement is required; mechanical issues with the system operation including valve sequencing; and for non-regenerative systems, the expected life of the bed before replacement. The proposed rule incorporates different monitoring requirements for adsorption systems based on our review of 40 CFR part 63, subparts G, SS, GGG, MMM, FFFF, GGGGG and BBBBBB, as well as monitoring approaches that have been outlined and approved by the EPA in monitoring alternative requests.

We are proposing the use of CEMS or CPMS to ensure the adsorption system operates consistently; we have included parametric monitoring provisions in Table 2 of subpart M in order to accommodate systems where a CEMS is not used. Because there is no single parameter you can monitor to ensure that all operating aspects are functioning properly, the proposal combines several monitoring approaches, each of which addresses common adsorber system performance issues. These include: (1) Monitoring of the regeneration process, (2) establishing and adhering to a regeneration frequency, (3) daily verification of system operating parameters and (4) routine sampling of the vent stream.

The regeneration process monitoring provisions for non-vacuum systems include regeneration stream flow and adsorber temperature. These are key parameters to ensure the adsorption bed is sufficiently desorbed at the start of an adsorption cycle, and have long been known to influence adsorption performance. We have added the requirement to establish and adhere to a pre-defined interval for regeneration frequency in order to prevent overloading the bed and possibly incurring breakthrough during the adsorption cycle before regeneration is initiated. We considered alternatives to a pre-defined interval that would take into account the organic loading on the bed, but determined that regeneration on a prescribed schedule provides greater assurance that there would be sufficient adsorptive capacity at all times.

Regenerative adsorption processes are typically multiple bed systems with complicated valve and piping arrangements designed to handle the vent streams and desorption streams on a batch basis. Because the consistent operation of the valves in these systems is critical to performance, we have included requirements for daily verification of the adsorber valve sequencing and cycle time. This daily system check will ensure that the adsorber is operating with proper valve sequencing and cycle time.

While adsorption systems can achieve high levels of efficiency for removal of organic compounds from vent streams, performance degrades over time as the adsorption media deteriorates or becomes fouled. Because of this known performance deterioration, and because there are many mechanical elements in the system which can cause performance problems, we are proposing weekly measurements of the adsorber bed outlet VOC or regulated material concentration over the last 5 minutes of an adsorption cycle for each adsorber bed. These measurements are not meant to be a check against the emissions limit established by the referencing subpart; rather, it is a check to determine if the absorber performance is deteriorating and/or has deviated from typical operation. By conducting weekly checks, the owner or operator will establish knowledge of typical operating conditions, so that if performance does degrade, it will become clear based on changes in the weekly measurements. We are proposing that the owner or operator establish a maximum normal concentration to compare to the weekly measurements. If a measurement is obtained that is above the maximum normal concentration, a corrective action process must be initiated within 8 hours. We are proposing that you must develop a corrective action plan that includes investigation of the adsorbent and its efficacy, the valve sequencing system and regeneration process, and additional monitoring, as well as site-specific corrective actions appropriate to the system. This plan is not required to be submitted to the Administrator for approval, but is required to be kept as a record per the requirements of proposed 40 CFR 65.742(j)(1).

Measurements for the weekly checks on each adsorber may be taken with a portable analyzer using Method 21 of 40 CFR part 60, appendix A–7 for open ended lines, or using chromatographic analysis. Acceptable levels for end-of-cycle measurements, the maximum normal concentration will be established based on a statistical evaluation of the last 5 minutes of at least eight adsorption cycles for each adsorber. Because these measurements are taken in the last 5 minutes of the adsorption cycle, they indicate the worst-case emissions over the adsorber cycle. Therefore, they are not indicators of compliance with the emission limit, but instead are indications of non-normal operation, which trigger a corrective action. An adsorber would not be considered to be in deviation unless three consecutive weekly measurements are taken that are above the maximum normal concentration; if the requirement to initiate corrective action within 8 hours is not met; or if a weekly measurement is not performed. See section VII of this preamble for a discussion of the economic and cost impacts of these requirements.

Because the materials desorbed during the regeneration process are regulated materials and are either recovered or disposed of, we are proposing explicit requirements to treat the regulated materials extracted from a regenerative system as process wastewater or vent streams subject to control, as specified by the referencing subpart.

Very few previously published rules have addressed adsorption systems, which are not regenerated onsite. Because there is wide application of non-regenerative adsorption systems, we are including provisions for these systems in the proposed rule. For clarity, we have differentiated the proposed requirements for absorbers generated onsite and the requirements for non-regenerative adsorbers or

regenerative adsorbers that are regenerated offsite in separate sections.

As a guideline for the proposed monitoring, we used the National Emission Standards for Site Remediation (40 CFR part 63, subpart GGGGG), as well as monitoring approaches approved by the EPA in alternative requests for monitoring and in enforcement actions to address historical compliance issues with non-regenerated adsorbers. We are proposing CEMS monitoring for the adsorber exhaust. Alternatively, we are proposing requirements for dual adsorbent beds in series and daily monitoring. We have prescribed a dual bed system because the use of a single bed does not ensure continuous compliance unless the bed is replaced significantly before breakthrough. A dual bed system will allow one bed to be saturated before it is replaced and, therefore, makes efficient use of the adsorber bed without exceeding the emission limits. Facilities utilizing non-regenerative adsorbers must typically replace the adsorber bed at the end of the absorbent life and already have a second bed onsite. Therefore, we have determined that these requirements would not impose a cost increase; it would only require a second adsorber bed to be purchased earlier than it would have under previous rules. In addition, once the second adsorber was purchased, the source would need to purchase and install canisters at the same rate they would have under previous rules. In fact, the source could likely reduce costs over time because the adsorber beds can be used to a greater saturation level without risking non-compliance. Under current rules that do not require a second bed, sources must replace the beds, based on temperature readings, the vendor's bed life expectancy estimates or past history, and may replace the bed prematurely in order to avoid non-compliance. The burden of purchasing the initial additional adsorber bed, when compared to the large increase in compliance assurance, is small.

Similar to regenerative adsorbers, in order to monitor performance deterioration, we are proposing measurements of VOC or regulated materials using a portable analyzer or chromatographic analysis for non-regenerative absorbers. We are proposing that these measurements be taken daily on the outlet of the first adsorber bed in series using a sample port. Furthermore, in order to relieve some monitoring burden, we have included the option to reduce the frequency of monitoring with the portable analyzer from daily to weekly or monthly. If you choose this option, you would first be required to establish an average adsorber bed life. For periods when more than 2 months remain on the bed life, monthly monitoring can be conducted, and when more than 2 weeks remain on the bed life, weekly monitoring can be conducted. For a discussion of the economic and cost impacts of these monitoring requirements, see section VII of this preamble.

Condensers. The proposed standards include requirements for condensers used as control devices, which are based on the standards of 40 CFR part 63, subpart SS. Subpart SS requires that ''exit (product side)'' temperature be monitored; the proposed rule clarifies that the temperature of the ''condensate receiver'' be monitored. The proposed standards require a design evaluation be conducted on condensers instead of a performance test to demonstrate compliance. The equilibrium calculation for condensers using the actual measured temperature and a thorough understanding of the stream composition is an accurate method for estimating emissions in the exiting gas stream from a condenser. A performance test for condensers generally does not provide additional information that equilibrium calculations would not provide. Furthermore, requiring a design evaluation will reduce overall costs for owners and operators who are referred to the Uniform Standards for Control Devices. However, a performance test could be required by the referencing subpart if it is determined to be more appropriate for a given source category.

As part of the design evaluation, we are proposing that you use the engineering evaluation methodologies in 40 CFR 65.835(d) with the temperature of the condensate receiver to determine the outlet organic regulated material concentration. You would then be required to show the concentration meets the emission standard established in the referencing subpart, or to conduct additional calculations to demonstrate a percent reduction or aggregate percent reduction for batch process vents in a referencing subpart was being met.

In the design evaluation for condensers, we have included a provision to consider conditions under which entrainment of the condensing liquid could occur, as well as the other operating conditions traditionally included in a condenser design evaluation, such as the vent stream flow rate, relative humidity and temperature. Entrainment is an important factor in condenser performance that should be considered in a design evaluation in order to document that the condenser achieves the required emission reduction from a referencing subpart.

Biofilters. We are proposing standards for biofilters used as control devices in proposed 40 CFR 65.748. We are providing these requirements as an additional control option for the Uniform Standards for Control Devices in order to add flexibility for industry. Compliance requirements for biofilters were included in a final amendment to the MON (71 FR 40333, July 14, 2006) as a response to comment by commenters. The final amendments specified that biofilters are an option for complying with the 95-percent reduction emission limit for batch process operations. A biofilter control option was not made available for continuous process operations in the MON because of concerns that biofilters could not meet the 98-percent control efficiency standard for continuous process operations. We are proposing biofilters as a control option for both batch and continuous process operations if you can demonstrate compliance with the emission limitation or percent reduction required by the referencing subpart. We are proposing you install a CEMS capable of measuring regulated materials, or you may install a temperature CPMS for the biofilter bed.

In biofiltration, microbial activity is the primary means by which the process stream is controlled; the effectiveness of the device is maximized by maintaining preferential conditions for the growth of appropriate microbes. Temperature is a significant factor affecting the growth and maintenance of healthy microbes within the bed—temperatures that are too high or too low will result in reduced microbe colonies and reduced performance for the bed. It is also a good indicator of the health of the microbes since healthy microbes will generate heat themselves. Therefore, we are requiring bed temperature monitoring to ensure that the biofilter can achieve and maintain the emission limits specified in the referencing subpart. For a discussion of the economic and cost impacts of these requirements, see section VII of this preamble.

Given the concerns expressed in the preamble to the final MON rule regarding continuous process operations, we are also proposing requirements to monitor the moisture content of the biofilter bed and pressure drop through the biofilter bed to ensure that the biofilter can achieve the emission limit or percent reduction requirements of the referencing subpart. The moisture content of the biofilter bed

is another indicator of the health of microbes. Pressure drop through the biofilter bed is important to ensure the filter bed is not plugged.

In lieu of these additional monitoring requirements, we are also considering requiring weekly measurements of VOC or regulated material at the outlet of each biofilter bed using a portable analyzer or chromatic analyzer to monitor performance deterioration, similar to those requirements proposed for adsorbers. We are soliciting comment, including the identification or submittal of information or data, as to whether biofilter bed temperature monitoring would be enough for continuous compliance demonstration. Additionally, we are soliciting comments and supporting data or studies that assess the effectiveness of measuring additional parameters to ensure performance and compliance.

The MON does not allow a design evaluation to demonstrate compliance for biofilters; however, we have included provisions for a design evaluation if the referencing subpart allows one. A design evaluation for a biofilter may be adequate to demonstrate compliance for certain source categories; however, this will need to be considered on a source category-specific basis and justified in the referencing subpart rulemaking.

Sorbent injection and collection systems. In order to provide additional control technologies that will expand the options for future rulemakings, we are proposing requirements for sorbent injection systems that remove pollutants from exhaust gas. Sorbent injection is an emissions control technique that was developed to reduce pollutants from exhaust gas, primarily from combustion sources. The sorbent injected into the gas stream may be activated carbon, lime or any other type of material injected into a gas stream for the purposes of capturing and removing regulated materials.

Activated carbon is used in sorbent injection systems where control of mercury or dioxin and furan emissions is required. Lime or other sorbents may also be used in sorbent injection systems to remove acid gasses, such as hydrochloric acid or sulfuric acid. Sorbent injection is used in conjunction with a filtration device designed to collect the sorbent after injection.

As a basis for developing the proposed rule, we have adapted the requirements for sorbent injection systems that were included in the final rule for National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry (75 FR 54970, September 9, 2010). This recent NESHAP determined monitoring and performance specification requirements for sorbent injection systems and carrier gas systems that reflect the latest technical developments for these control options. In addition, facilities complying with the proposed provisions for sorbent injection would also be required to meet the requirements for fabric filters in proposed 40 CFR 65.762. The Portland Cement NESHAP requires facilities to specify and use the brand and type of sorbent used during the performance test until a subsequent performance test is conducted. We are proposing that you would be required to test if you wanted to substitute a different brand or type of sorbent. Although the Portland Cement NESHAP allows an owner or operator to substitute different brands or types of sorbent without having to do a new performance test (provided that the replacement has equivalent or improved properties compared to the sorbent used in the previous performance test), we have modified the proposed standards to require a new performance test if the sorbent is replaced with a different brand and type of sorbent than was used in the most recent performance test. As we intend the Uniform Standards for Control Devices to be referenced in both NSPS and NESHAP rulemakings across multiple source categories, this change ensures that the control device will continue to meet the emission limits or percent reduction requirements of a referencing subpart when a change of sorbent occurs. A referencing subpart may override this retest requirement if it is determined in its rulemaking to be unnecessary for the source category being regulated.

Provisions for a design evaluation for sorbent collection systems are proposed for this rule in the event that a referencing subpart allows a design evaluation to be conducted in lieu of a performance test. Because this is a relatively new control technology, there were no current rules that provided guidance for a design evaluation of a sorbent collection system. Therefore, we have developed the proposed requirements using recently published articles on activated carbon injection as a control technology. This research indicates that the parameters identified in proposed 40 CFR 65.760(d) provide the best evaluation of sorbent injection system performance.

Other control or devices. We have incorporated requirements for performance testing and the development of monitoring requirements on a case-by-case basis in order to address control devices that may be used by industry, but are not described specifically in this rule. These requirements are unchanged from the current provisions of 40 CFR part 63, subpart SS. Additionally, if other major control devices are used in specific source categories as a primary means for control, the referencing subpart can lay out such requirements needed in order to demonstrate compliance.

4. How did the EPA determine requirements for fuel gas systems?

In consideration of our experience implementing previous rules addressing fuel gas systems as control devices, we are proposing updated standards that clarify the definition of fuel gas system and ensure that these systems are achieving good combustion and control. Under 40 CFR part 63, subpart SS, owners and operators are permitted to route vent streams from storage tanks, transfer equipment and equipment leaks to a fuel gas system as a method of control (this compliance option is not specifically provided for process operations). Fuel gas systems are considered a part of the process, therefore process vent streams that are routed to a fuel gas system are not considered vent streams requiring control because they are not released to the atmosphere. The proposed rule does not specifically state that this control option is only for equipment leaks, storage tanks and transfer operations emissions. It is not necessary to allow this option for only some of the emission unit types, given that the proposed Uniform Standards may be referenced in future NESHAP and NSPS for multiple source categories and industry types, and those rulemakings can determine whether to restrict the control options for specific types of emission units.

As previously discussed for small boilers and process heaters in section V.B.3 of this preamble, small boilers or process heaters receiving vent streams subject to subpart M with a capacity less than 44 MW (in which the vent stream is introduced with combustion air or as a secondary fuel) would be subject to the requirements of proposed 40 CFR 65.724, whether they are part of a fuel gas system or not. If your fuel gas system directs the vent stream to small boilers or process heaters, you would still be required to meet the performance testing and monitoring requirements for small boilers and process heaters. As discussed in section V.B.3 of this preamble, larger boilers and process heaters in which the vent gas stream is introduced with or as the primary fuel have been recognized as units that can be confidently assumed to achieve good combustion. There is not

the same confidence in the performance of small boilers and process heaters; therefore, we are proposing that the units be tested and continuously monitored.

We expect, in most cases, the vent gas stream of fuel gas systems will be introduced as the primary fuel and/or will be routed to larger units. We want to continue to encourage the use of this otherwise waste gas. However, if small boilers and process heaters are attached to the fuel gas system, then you would be required to conduct performance testing and monitoring. We do not expect this scenario to be common. We also considered defining a fuel gas system such that the vent gas must be introduced with or as a primary fuel, but determined that this would reduce flexibility for sources.

Under the proposed standards, all fuel gas systems that are in regulated material service must perform quarterly LDAR monitoring and would be required to meet the applicable provisions of proposed 40 CFR part 65, subpart J (see section IV.A of this preamble) as they apply to the individual equipment components that comprise the fuel gas system. We are proposing these requirements to ensure that a vent stream in regulated material service is properly routed by the fuel gas system and delivered to the combustion device for destruction. We expect that most fuel gas systems meet the applicability of the LDAR requirements and are already conducting LDAR monitoring; therefore, these requirements are not expected to introduce a new or unnecessary regulatory burden for industry.

The proposed standards revise the definition of *fuel gas system* to include the requirement that the fuel in the fuel gas system be nonhalogenated. It is common for chemical sector rules to include a prohibition on combustion of halogens and a requirement for hydrogen halides or halogen reduction after combustion. However, this requirement was not explicit for vent streams routed to a fuel gas system under previous rules, and it is not our intent to allow halogenated streams to be combusted without additional control. Because fuel from fuel gas systems can be used in any number of combustion sources, hydrogen halide and halogen reduction after combustion is less likely to be feasible. Additionally, because process vent streams could be routed to the fuel gas system and not be subject to the rule, yet could still contain significant amounts of halogens, we are proposing this definition change to ensure that HAP are not created through the combustion of a regulated material.

5. How did the EPA determine the proposed requirements for fabric filters?

We have incorporated requirements for fabric filters in subpart M with the intent to simplify future rulemakings that would refer to the Uniform Standards. The proposed monitoring, recordkeeping and reporting requirements may be referenced by new or revised NSPS or NESHAP that would establish standards for PM or other regulated materials controlled by fabric filters and not previously covered by other consolidated rulemakings. As such, the consolidation of fabric filter requirements in subpart M facilitates more efficient rulemaking and ensures consistent standards for these control devices across multiple source categories. The monitoring, design evaluation and recordkeeping and reporting requirements for fabric filters were modeled after the Pesticide Active Ingredient Production NESHAP (40 CFR part 63, subpart MMM, as referenced by the MON) and the final rule for National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry, published on September 9, 2010 (40 CFR part 63, subpart LLL, 75 FR 54970). The proposed requirements include the installation of a bag leak detection system equipped with an alarm that will sound when an increase in relative PM emissions over a preset level is detected.

The Portland Cement Manufacturing NESHAP required that the bag leak detection system be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (mg/acm) or less. Because we intend the proposed Uniform Standards to be applicable for the majority of source categories complying with MACT, we considered that there may be future rulemakings that need to specify lower PM emission limits and would require a lower allowable detection limit for the bag leak detectors. Based on vendor literature, modern bag leak detection systems are capable of detecting baseline emissions as low as 1 mg/acm (see, *Fabric Filter Bag Leak Detection Guidance,* EPA–454/R–98–015, September 1997, incorporated by reference). Therefore, we are requiring that the bag leak detection system be certified at a detection level of 1 mg/acm or less. This requirement may be overridden by a referencing subpart in future rulemakings, as appropriate, based on the specific needs of the source category.

We have also added a provision previously included in the Major Source Industrial, Commercial, and Institutional Boilers and Process Heaters NESHAP (76 FR 15608, March 21, 2011), requiring that the bag leak detection system must be operated and maintained such that the alarm does not sound more than 5 percent of the operating time during a 6-month period. We are requiring records of the total alarm time and corrective actions taken following an alarm sounding for demonstration of compliance. These requirements are operation and maintenance requirements that could be adopted in future rulemakings to ensure that the fabric filter is being operated at the conditions for which the control device is meeting the emission limit specified in the referencing subpart.

Additionally, the proposed rule requires that you conduct a performance test on your fabric filter, but provisions have been included for those situations where a design evaluation is acceptable and allowed by the referencing subpart (see sections V.A.9 and V.B.8 of this preamble).

6. How did the EPA determine the performance testing requirements?

The performance testing requirements that we are proposing are modeled after specific requirements from 40 CFR part 63, subpart SS, which are based on performance testing requirements previously developed by the EPA for use in implementing standards that could apply to a variety of chemical industry sources.

We have organized the performance testing requirements to group similar topics together, and added new methods for performance testing to develop a more generic and inclusive set of control requirements that may be easily referenced in future rulemakings. In addition to using the term ''regulated material'' (see *General differences between proposed 40 CFR part 65, subpart M and 40 CFR part 63, subpart SS* at the beginning of section V.B of this preamble), we are proposing performance testing requirements that reflect this broader range of pollutants.

Although based on language from 40 CFR part 63, subpart SS, where we propose that you conduct all performance tests at maximum representative operating conditions for continuous process operations, we have defined maximum representative operating conditions to be those conditions that result in the most challenging condition for the control device. In an effort to provide more flexibility to owners and operators regarding the identification of the

proper testing conditions, the most challenging condition for the control device may include, but is not limited to, the highest HAP mass loading rate to the control device, or the highest HAP mass loading rate of constituents that approach the limits of solubility for scrubbing media. The EPA understands that there may be cases where efficiencies are dependent on other characteristics of emission streams, including the characteristics of components and the operating principles of the devices. For example, the solubility of emission stream components in scrubbing media, or emission stream component affinity in carbon adsorption systems can also define the most challenging condition for a particular control device.

For batch process operations, we are proposing consistent requirements to those in 40 CFR part 63, subparts GGG and FFFF, and are requiring that you develop an emissions profile and conduct your performance test at absolute worst-case conditions or hypothetical worst-case conditions. Although continuous operations tend to have products and operations that remain relatively constant, the control devices for batch operations may be subject to a wide variability of products and emission stream characteristics, and a performance test at ''maximum representative'' conditions for batch operations may not be representative at a later date when the products have changed. Absolute worst-case conditions are based on an emissions profile that shows periods of time when the maximum load, the regulated material loading or stream composition (including non-regulated material) is the most challenging condition for the final control device. To provide flexibility for sources, we are also proposing that you may test under hypothetical worst-case conditions as an alternative. Hypothetical worst-case conditions are simulated test conditions that, at a minimum, contain the highest hourly load of regulated material emissions that would be predicted to vent to the final control device, based on an emissions profile.

The agency's intent, when requiring the development of an emissions profile, is to determine the maximum HAP loading to a control device over time. Therefore, the proposed rule requires that the emissions to the device be evaluated by plotting HAP emissions versus time. To provide multiple options for compliance, we have allowed for the emission profile to be determined by process, by equipment or by capture and control device limitation (this would be dependent on how you choose to characterize your worst-case conditions). When sources test under worst-case conditions, this reduces, and may eliminate, in some cases, the need for any retesting at a later date when conditions change. If a source tested under normal operating conditions, then any change from these conditions would trigger a need to retest the source under the revised normal operating conditions. The concept of worst-case conditions allows sources to anticipate potential changes so that only one (initial) test is generally required, which would reduce the burden on the source. We note that the referencing subpart could require a re-test (*e.g.,* annual or every 5 years) if it is appropriate to demonstrate compliance for a given source category; this would be determined during the rulemaking process for the referencing subpart.

Building off the requirements of 40 CFR part 63, subpart SS, the MON uses a hierarchy to determine applicable requirements for combined emission streams in 40 CFR 63.2450(c)(2). For example, the MON allows you to comply with only the batch process operation requirements for combined batch and continuous process operations. However, for the proposed rule, we are not establishing a hierarchy because the referencing subpart must consider the applicable statutory requirements for the specific type of rulemaking (CAA section 111 or section 112). Instead, we are proposing that you must meet all requirements for each emission stream type in a combined emission stream (*i.e.,* both continuous and batch process operation requirements must be met). The proposed rule is written in this way to ensure compliance for each emission stream. A hierarchy may be appropriate for certain source categories; however, this will need to be considered on a source category-specific basis during the development of the referencing subpart. A referencing subpart can override specific requirements in the Uniform Standard, as appropriate.

We are proposing that if you make a change to process equipment or operating conditions that would affect the correlation between the operating parameter values of a control device and the emission reduction performance of that control device, and would render the previously established operating limits ineffective, you must conduct a performance test within 180 days of the date of startup of the change. This performance test would be necessary to establish new operating limits and demonstrate that you are in compliance with the applicable emission limit of the referencing subpart. For instance, a facility could institute changes that increase the mass flow to a thermal oxidizer, requiring a higher operating limit for temperature to maintain compliance with the emission standard of the referencing subpart. This proposed requirement is necessary to ensure that the control device remains effective for compliance with the referencing subpart.

We have consolidated the allowed test methods in Table 5 of subpart M for ease of reading. The proposed rule provides test methods based on the types of emissions limits that we anticipate would be specified in a referencing subpart. As was done in the MON (for gas streams containing formaldehyde) and in the Pharmaceuticals Production NESHAP (for gas streams containing carbon disulfide), we have provided specific test methods for determining compliance when formaldehyde or carbon disulfide makes up a significant portion of the vent stream. Consistent with our previous determinations under these rules, we have ascertained that not all methods detect these compounds accurately and these specific methods are necessary in the proposed Uniform Standards.

We also are proposing that you may use Method 320 of 40 CFR part 63, appendix A as an alternative to using Method 18 or Method 26/26A of 40 CFR part 60, appendices A–6 through A–8, to determine compliance with a specific organic regulated material compound outlet concentration or percent reduction emission limit, or a hydrogen halide emission limit specified in the referencing subpart. In response to a public comment, the Method 320 of CFR part 63, appendix A option was added to the MON at final promulgation (68 FR 63852, November 10, 2003). The EPA declared that Method 320 of CFR part 63, appendix A was an acceptable method to demonstrate compliance for any type of batch or continuous vent stream. We have augmented this provision by specifying that EPA Method 320 may only be used to demonstrate compliance with a halogen emission limit if you can show that there are no diatomic-halogen molecules present in the vent stream being tested. For vent streams with diatomic-halogens molecules, we have determined that EPA Method 18 and EPA Method 26/26A are more effective. In addition, we are not allowing EPA Method 18, ASTM D6420–99 and EPA Method 320 to test for total regulated material because these methods only work for determining the quantity of known pollutants; therefore, you could

fail to identify the ''total'' regulated material.

Because a referencing subpart may have requirements for organic HAP and metal HAP, or requirements for use of a surrogate, such as PM or fine particulate matter ($PM_{2.5}$) for metal HAP, we have incorporated provisions from the MON that tell you how to determine compliance with a PM or $PM_{2.5}$ emission limit specified in a referencing subpart. (As discussed in section II.C of this preamble, the referencing subpart would establish and provide rationale for the use of a surrogate.) As determined under the MON, Method 29 of 40 CFR part 60, appendix A–8 allows you to determine the quantity of each HAP metal at the inlet and outlet of the control device(s). Furthermore, the MON allows for a second option, since controls for PM would also control the HAP metals, to use Method 5 of 40 CFR part 60, appendix A–3 to determine the quantity of PM at the inlet and outlet of the control device(s). We are proposing Methods 201A and 202 at 40 CFR part 51, appendix M, or, if the stack contains entrained water droplets (*e.g.,* immediately after a wet scrubber), Method 5 at 40 CFR part 60, appendix A–3 and Method 202 for total $PM_{2.5}$. We have determined that EPA Methods 201 and 202 are more accurate for measurement of $PM_{2.5}$. It is our determination that the methods proposed represent the best and most recent methods for measurement of HAP, VOC, PM and $PM_{2.5}$.

7. How did the EPA determine the requirements for batch processing operations?

We are proposing language from the MON and the Pharmaceuticals Production NESHAP (40 CFR part 63, subpart GGG) to accommodate batch process operations. The MON primarily references the batch process operation provisions in the Pharmaceuticals Production NESHAP. The proposed standards are intended to be referenced from multiple regulations representing different source categories, and do not set group determinations or levels of control.

We have included provisions in proposed 40 CFR 65.826 and 40 CFR 65.827 explaining how compliance should be demonstrated for the different emission limit formats that a referencing subpart may use for batch process operations. The language accommodates percent reduction or outlet concentration limits for control devices. We have included the emission limit format from the MON that requires the owner or operator to show compliance with a percent reduction by aggregating emissions over the full batch process. These requirements would apply only when a referencing subpart requires the owner or operator to show compliance with a percent reduction using this method (see section V.A.8 of this preamble). We have included language (see equations 29 through 31 of proposed 40 CFR 65.835(a)) clarifying how to determine compliance with a percent reduction where a referencing subpart requires the owner or operator to aggregate batch emissions. The equations illustrate how you would compare the sums of the controlled and uncontrolled emissions for all batch process operations subject to control within the process to calculate the percent reduction achieved. This is a clarification of the MON language, which stated that uncontrolled and controlled emissions should be compared to demonstrate compliance, but did not provide additional details to explain how this should be done.

We are proposing engineering evaluation methodologies that are incorporated by reference from section 3 of the EPA's *Emissions Inventory Improvement Program, Volume II: Chapter 16, Methods for Estimating Air Emissions from Chemical Manufacturing Facilities,* August 2007, Final, (EPA Emissions Inventory Improvement Program (EIIP) Volume II: Chapter 16). These methods are similar to those used in the Pharmaceuticals Production NESHAP, but include some refinements, such as an iterative methodology for purging, or gas sweep of a partially filled vessel emission episode. EPA EIIP Volume II: Chapter 16 also contains additional methodologies (that were not included in the Pharmaceuticals Production NESHAP) for calculating emissions from charging to a partially filled vessel with miscible contents, and evaporation from an open top vessel or spill. We are proposing that you conduct an engineering assessment to calculate uncontrolled emissions from other emissions episodes not described in EPA EIIP Volume II: Chapter 16. We are soliciting comment on the proposed use of EPA EIIP Volume II: Chapter 16.

8. How did the EPA determine the requirements for compliance through design evaluation?

With the exception of condensers, the proposed standards under subpart M require performance testing to demonstrate compliance with the applicable standard. However, to provide flexibility, we are including requirements for a design evaluation that could apply to non-flare control devices if it is allowed by the referencing subpart. For condensers, we are proposing that you must conduct a design evaluation (see discussion for condensers in section V.B.3 of this preamble).

Subpart M is structured such that general requirements for conducting a design evaluation are included under one section (proposed 40 CFR 65.850). More specific requirements pertaining to information that must be included in the design evaluation for each type of device are included in the corresponding section for that control device. The requirements for determining the components to include in a design evaluation are based on 40 CFR part 63, subpart SS, which were previously developed by the EPA for use in implementing a generic set of control standards that could be applied for multiple source categories. To ensure that sources can demonstrate compliance with the referencing subpart, we are proposing that you must prepare both a monitoring description and design evaluation. The monitoring description provides documentation that the source is maintaining the continuous monitoring equipment such that the control device can meet the emission limits specified in the referencing subpart. For the monitoring description, you would be required to choose the parameters, the operating limit(s), the monitoring frequency and the averaging time for each operating parameter, based on site-specific information, manufacturer's specifications, engineering judgment or other significant information. Your design evaluation would include documentation demonstrating that the control device being used achieves the required emission limit of a referencing subpart, taking into account the composition of the vent stream entering the control device, flow and regulated material concentration. There were no changes made to the design evaluation provisions except for the changes to: (1) Small boilers and process heaters, (2) oxidizers regarding the minimum temperature and residence time and (3) the inclusion of a design evaluation for biofilters when allowed by the referencing subpart (see previous discussion in section V.B.3 of this preamble).

9. How did the EPA determine the required records and reports for this proposed standard?

The notification, recordkeeping and reporting requirements that we are proposing are similar to those required in 40 CFR part 63, subpart SS. However, we have streamlined the periodic

compliance reporting with title V semiannual reporting requirements, incorporated updates for clarification, left out provisions that are redundant or unnecessary and created recordkeeping and reporting requirements to address any monitoring requirements included in the Uniform Standards. Many of these details are discussed in section VI.B.6 of this preamble.

Averaging Periods. We are proposing records of the daily or operating block average (for batch operations) value of each continuously monitored parameter or emissions.

Although some regulations under 40 CFR part 60 and 40 CFR part 61 require 3-hour averaging (*e.g.,* the SOCMI Air Oxidation NSPS, 40 CFR 60 Subpart III; the SOCMI Distillation Operations NSPS, 40 CFR 60 Subpart NNN; and the SOCMI Reactor Processes NSPS, 40 CFR 60 Subpart RRR), many of the part 63 regulations require daily averages. Specifically, with the exception of the recently proposed polyvinyl chloride and copolymers (PVC) rule (40 CFR 63, subpart J for PVC Production; 76 FR 29528, May 20, 2011), which requires 3-hour averaging, daily averaging periods are used in all past part 63 NESHAP affecting the chemical and refining sectors. Therefore, the EPA has decided to allow daily averaging for all control devices, unless otherwise provided under a referencing subpart.

We also do not consider daily averaging a relaxation of the previous NSPS that currently require more frequent averaging. Specifically, the 3-hour averages in NSPS and the daily averages in part 63 should not be compared only considering the averaging time, but one should also consider the meaning of out-of-range results. Under the NSPS, an out-of-range 3-hour average does not necessarily mean the source is out of compliance. Under the 40 CFR part 60 General Provisions, compliance with emission standards is determined by a performance test (see 40 CFR 60.11(a)). Under the 40 CFR part 63 General Provisions, it is clear that deviations from monitoring parameter ranges are direct violations (see 40 CFR 63.6(e)).

Under the proposed Uniform Standards, we have adopted the significance of out-of-range results from 40 CFR part 63; therefore, an out-of-range parameter on a daily average basis is a violation. We would allow the same out-of-range parameter determinations from 40 CFR part 63 to be made in all referencing subparts, including regulations under 40 CFR part 60 and 40 CFR part 61. Therefore, although facilities from 40 CFR part 60 or 40 CFR part 61 referenced to the Uniform Standards may become subject to daily averages in lieu of 3-hour averages, they would also be considered out of compliance if the daily average is out of range, provided this change is adopted in the rulemaking for the referencing subpart.

We anticipate that the referencing subpart may ''override'' the proposed daily averaging period with a stricter requirement if it is determined that such a requirement would be necessary to maintain the emission standard for the source category covered by the referencing subpart. A good example of such a source category is the proposed PVC Production NESHAP. It was determined for proposal that, for this source category, 3-hour averages are necessary to meet MACT. We consider the development of a referencing subpart at the appropriate time to make these source-category specific decisions.

We are proposing that you must report the daily and operating block averages for each continuously monitored parameter as part of the semiannual periodic report submitted through the CEDRI (see section II.F of this preamble). The EPA relies on the submittal of performance test data and emissions and parametric monitoring data to conduct effective reviews of CAA sections 111 and 112 standards, as well as compliance determinations, emission factor development, residual risk assessments and technology reviews. These emissions averages and parameter averages could supply up-to-date information regarding the capabilities of current industry technology, identify compliance issues and supplement emissions test data for establishing emission factors, improving regulation and improving the quality of emission inventories. Collecting this data on an ongoing basis through CEDRI will greatly reduce or eliminate the burden to industry and EPA from ICR efforts.

Recordkeeping and reporting of batch operations. The recordkeeping and reporting requirements for batch operations were modeled after the MON (40 CFR part 63, subpart FFFF) and Pharmaceuticals Production NESHAP (40 CFR part 63, subpart GGG). 40 CFR Part 63, subpart SS, as promulgated, contains only provisions for combined continuous and batch operations. We have drawn the requirements from 40 CFR part 63, subparts GGG and FFFF because these NESHAP contain and clarify technical requirements for batch process operations; in particular, the MON improves upon some of the technical requirements of the Pharmaceutical Production NESHAP and reflects a set of standards that both industry and the EPA have experience in implementing. The inclusion of requirements for batch operations allows the proposed Uniform Standards to accommodate a wider range of source categories. The proposed recordkeeping and reporting requirements reflect our most current survey of batch operations under 40 CFR part 63, subparts GGG and FFFF.

The proposed subpart M includes a pre-compliance report for batch processes, as does the MON and Pharmaceuticals Production NESHAP. This report is a combination of data submittals and reports that require the EPA review and approval prior to implementation and is, therefore, due before the compliance date (6 months prior to the compliance date for existing sources and to be submitted with the application for approval of construction or reconstruction for new sources). While we have designed the requirements for batch process operations to provide flexible options for compliance for owners and operators, we must ensure compliance with the MACT, GACT and BSER standards specified in the referencing subpart. We contend that the pre-compliance report is a valuable tool for the regulatory agency responsible for making compliance determinations. The batch pre-compliance requirements include providing details on the test conditions, data, calculations and other information used to establish operating limits for all batch operations, and rationale for why each operating limit indicates the control device is meeting the specified emission limit of the referencing subpart during each specific emission episode. If you used an engineering assessment, as specified in 40 CFR 65.835(b)(2), you would also include data or other information supporting a finding that the emissions estimation equations in the proposed subpart M are inappropriate. These data would include very detailed site-specific information and complex rationale for the selection of operating limits and emissions calculations. It is important that such data are reviewed prior to compliance to provide time to revise the CEMS performance evaluation and monitoring plan or the CPMS monitoring plan and conduct any necessary onsite preparation for revised monitoring requirements, based on the EPA concerns prior to the compliance date. This will ensure that there are no periods of noncompliance resulting from selection of an unacceptable approach. In the proposed Uniform Standards, we are using the term ''batch pre-compliance report'' rather than

''pre-compliance report'' because the report is submitted for only batch processes and includes only the batch information listed in this paragraph.

There are several items required in the pre-compliance report for the two previous NESHAP that are not proposed in subpart M because they are not related to the control devices covered by this proposed rule. For example, we are not proposing requirements to determine wastewater characteristics, as required by the Pharmaceuticals Production NESHAP, because we are not proposing requirements for wastewater facilities at this time.

Several source categories, including the Miscellaneous Organic Chemical Manufacturing source category and the Pharmaceuticals Production source category, use non-dedicated, multipurpose equipment that may be configured in numerous ways to accommodate different batch processes. We anticipate that when a NSPS or NESHAP considers referencing subpart M for a batch process operation, there could be a need to anticipate alternate operating scenarios for the batch process. As such, we are proposing these requirements in subpart M in order to accommodate these alternate scenarios.

Fabric filter recordkeeping and reporting. We modeled the recordkeeping and reporting requirements for fabric filters after the Pesticide Active Ingredient Production NESHAP and the Portland Cement Manufacturing NESHAP. These rulemakings reflect previous EPA determinations for fabric filter control. We considered, but are not proposing, that pre-compliance information be submitted for these control devices. In particular, the Pesticide Active Ingredient Production NESHAP and MON require an operation and maintenance plan and corrective action plan be submitted as part of a pre-compliance report. Instead, we are proposing that each bag leak detection system must be installed, operated, calibrated and maintained in a manner consistent with the manufacturer's written specifications and recommendations, and in accordance with the guidance provided in EPA–454/R–98–015, September 1997. Therefore, we feel it is not necessary to pre-approve the fabric filter plans when these requirements are followed. A future referencing subpart may require prior approval if it is determined that it is appropriate for a given source category and considering the applicable statutory requirements for the specific rulemaking (*e.g.,* MACT, GACT and/or BSER standards), or we may choose to adopt separate requirements for a particular source category in a referencing subpart. We are proposing that the operation and maintenance plan and corrective action plan for fabric filters be submitted as part of the Notification of Compliance Status Report instead of a pre-compliance report. The manufacturer's guidance and the EPA guidance document provide adequate information for owners and operators to prepare appropriate operation and maintenance and corrective action plans. We anticipate that fabric filter operation does not vary enough to require site-specific pre-review of these documents, although a referencing subpart may always override these requirements for a given source category.

VI. Summary and Rationale for the Proposed Revision of 40 CFR Part 65 Uniform Standards General Provisions—Subpart H

This section summarizes and provides rationale for the supplemental proposal for 40 CFR part 65, subpart H. This subpart was originally proposed on January 6, 2012 (77 FR 960). This supplemental proposal generally adds new language and sections applicable to proposed subparts H, I, J and M. There are some changes to the language originally proposed, but these are relatively small changes needed to incorporate the additional Uniform Standards subparts.

In section VI of this preamble, the term ''we'' refers to the EPA and the term ''you'' refers to owners and operators affected by the proposed standards. All other entities are referred to by their respective names (*e.g.,* reviewing authorities.) Additionally, ''subpart H'' refers to proposed 40 CFR part 65, subpart H.

A. Summary

In a previous proposal of the National Uniform Emission Standards for Heat Exchangers (40 CFR part 65, subpart L), signed by the EPA Administrator on November 30, 2011 (77 FR 960, January 6, 2012), we proposed general provisions in subpart H that would apply to all sources subject to all Uniform Standards. In that proposal, we specified that 40 CFR parts 60, 61 and 63, subpart A (*i.e.,* referred to in this preamble section VI as ''the 40 CFR parts 60, 61 and 63 General Provisions'') would still apply as the General Provisions for the Uniform Standards, with relatively minor additions in subpart H. During development of proposed 40 CFR part 65, subparts I, J and M, we reviewed this approach, in part under Executive Order 13563, *Improving Regulation and Regulatory Review,* (see section II.A of this preamble for further discussion of Executive Order 13563) to ensure that this would be the best approach.

Based on this review, we have determined that certain reporting provisions in the 40 CFR parts 60, 61 and 63 General Provisions are not consistent with each other (*e.g.,* report names), and that these differences could hamper efforts to provide compliance methods for all sources under one part. Additionally, we have determined that some 40 CFR part 63 general provisions include more details (e.g., detailed instructions for requesting a performance test waiver) that are not provided for the same kind of provision in the 40 CFR parts 60 and 61 General Provisions (*e.g.,* allowing a request for a performance test waiver without detailed instructions). Applying these more detailed 40 CFR part 63 general provisions to sources covered under 40 CFR parts 60 and 61 would result in more clarity and would facilitate the compliance process for sources regulated under 40 CFR parts 60 and 61 that refer to the Uniform Standards.

As such, we have concluded that the best approach to providing general provisions for the 40 CFR part 65 Uniform Standards is to consolidate some of the part 60, 61 and 63 general provisions, and to include these consolidated general provisions in subpart H. For the current proposal, we are issuing a supplemental proposal for subpart H in order to include additional provisions applicable to all Uniform Standards, as well as provisions applicable to individual Uniform Standards in 40 CFR Part 65, Subparts I, J and M.

For this purpose, we are maintaining five sections of subpart H proposed on January 6, 2012 (77 FR 960), and adding 12 new sections. Of the five previously proposed sections, we are proposing to make changes to three sections, as follows: (1) 40 CFR 65.200 will refer to 40 CFR 65.210, which specifies which general provisions in subpart A of 40 CFR parts 60, 61 and 63 apply to all Uniform Standards; (2) 40 CFR 65.265 will include additional methods incorporated by reference for 40 CFR part 65, subparts I, J and M; (3) 40 CFR 65.295 will include additional definitions of terms used in 40 CFR part 65, subparts I, J and M. The 12 new sections address the following consolidated general provisions applicable to all Uniform Standards: (1) General requirements for complying with the standards, operation and maintenance requirements, recordkeeping and reporting; (2) how to

request a waiver for testing, recordkeeping and reporting or an alternative monitoring, recordkeeping, test method or means of emission limitation; and (3) authorities not delegated to the states.

For those 40 CFR parts 60, 61 and 63 general provisions that would apply to the Uniform Standards and that would not be consolidated into subpart H, you are referred to Table 1 of subpart H, which lists the sections or paragraphs of the 40 CFR parts 60, 61 or 63 general provisions that still apply to the Uniform Standards. In general, Table 1 lists general provisions that are associated with applicability, initial notifications and permit application requirements, and requirements that are not the typical compliance provisions that a source must meet. Examples of the types of 40 CFR part 60, 61 and 63 general provisions listed in Table 1 include: 40 CFR 60.2, 61.02 and 63.2 (definitions); 40 CFR 60.3, 61.03 and 63.3 (abbreviations); 40 CFR 60.12, 61.05, 61.19 and 63.4 (prohibited activities, circumvention and fragmentation); and 40 CFR 60.5, 61.06 and 63.5 (determination of construction or modification; preconstruction review and notification requirements). Regulated sources subject to 40 CFR parts 60, 61 or 63 would remain subject to the provisions in Table 1, as applicable.

B. Rationale

1. What is the purpose of this subpart?

40 CFR 65.200 is proposed to be changed from the previously proposed 40 CFR 65.200 to specify that you would be required to comply with the General Provisions, as specified in 40 CFR 65.210 (refers to Table 1), as well as the referencing subpart.

2. Am I subject to the requirements of this subpart?

40 CFR 65.205 is proposed to be added to subpart H to make it clear who would be required to comply with the general provisions in subpart H. Subpart H applies to owners and operators who are subject to a referencing subpart and have been expressly directed to comply with the Uniform Standards by a referencing subpart. This section is needed so that you will understand the applicability.

3. When must I comply with this subpart?

40 CFR 65.206 was added as part of efforts to make consistent the organization of the Uniform Standards. The question of when to comply is addressed in only subpart H.

4. Am I subject to the General Provisions for part 60, 61 or 63 of this part?

We are proposing to add 40 CFR 65.210 to subpart H to specify that only some 40 CFR parts 60, 61 and 63 general provisions will apply to you. As discussed in section VI.A of this preamble, we reviewed the 40 CFR parts 60, 61 and 63 General Provisions and concluded that the best approach to providing general provisions for the 40 CFR part 65 Uniform Standards is to consolidate some of the 40 CFR parts 60, 61 and 63 general provisions, and to include these consolidated general provisions in 40 CFR part 65, subparts H and M. Consolidating these provisions will allow us to streamline these general requirements for the Uniform Standards, increasing the clarity of the General Provisions and facilitating the compliance process for all parties. Consolidation will also reduce administrative burden by facilitating our process of amending the referencing subparts in the future.

To consolidate the 40 CFR parts 60, 61 and 63 general provisions, we reviewed each general provision in 40 CFR parts 60, 61 and 63. For each provision, we determined if the general provision should be: (1) Consolidated into one general provision in subpart H that applies to sources complying with any Uniform Standard (you would not comply with the original, unconsolidated part 60, 61 or 63 requirement); (2) consolidated into one general provision in 40 CFR part 65, subpart M that applies to sources complying with 40 CFR Part 65, subpart M (you would not comply with the original, unconsolidated part 60, 61 or 63 requirement); (3) referred to in Table 1 to subpart H and required, as specified in 40 CFR parts 60, 61 or 63; or (4) excluded from the Uniform Standards because the provision does not apply to the types of sources that will be regulated using the Uniform Standards (*e.g.,* opacity and visible emissions provisions).

5. What are my general requirements for complying with operation and maintenance requirements?

Under 40 CFR part 60 and 40 CFR part 61, and as specified in subpart A of both parts, compliance is demonstrated with an emission limit using the results of a performance test; however, under 40 CFR part 63, the General Provisions specify that the Administrator will determine compliance based on performance tests, monitoring data, records, operation and maintenance procedures, and conformance to the procedures. In order to remove undue burden for individual source categories and provide consistent requirements for sources complying with the Uniform Standards, we have consolidated the general operation and maintenance compliance provisions of 40 CFR part 63 in proposed 40 CFR 65.215. These proposed provisions were developed, based on 40 CFR 63.6(e), (f) and (g). The proposed provisions are different from 40 CFR 63.6(e), (f) and (g) in that they include changes in terminology and cross-references, as well as removal of SSM provisions. The consolidated provisions in 40 CFR 65, subparts H and M would apply to all sources subject to referencing subparts.

We have not included provisions for SSM in these Uniform Standards, based on a recent District of Columbia Circuit ruling. The United States Court of Appeals for the District of Columbia Circuit vacated portions of two provisions in the EPA's CAA section 112 regulations governing the emissions of HAP during periods of SSM. *Sierra Club* v. *EPA*, 551 F.3d 1019 (D.C. Cir., 2008), cert. denied, 130 S. Ct. 1735 (U.S., 2010). Specifically, the Court vacated the SSM exemptions contained in 40 CFR 63.6(f)(1) and 40 CFR 63.6(h)(1), that are part of a regulation, commonly referred to as the ''General Provisions Rule,'' that the EPA promulgated under CAA section 112. When incorporated into CAA section 112(d) regulations for specific source categories, these two provisions exempt sources from the requirement to comply with the otherwise applicable CAA section 112(d) emission standard during periods of SSM.

Consistent with *Sierra Club* v. *EPA*, the Uniform Standards, as proposed, are designed to provide for continuous compliance with the emission standards of a referencing subpart. Future rulemakings that may reference the Uniform Standards will include a determination on the need for separate standards for startup and shutdown for the specific source category. Rationale for those provisions will be supplied at the time of proposal, thus, providing an opportunity for public comment. The final rulemakings for such referencing subparts would determine whether separate standards for startup and shutdown would apply in lieu of the otherwise continuously applicable referenced Uniform Standards.

6. What are my general recordkeeping requirements?

We are proposing to add 40 CFR 65.220 to require that you maintain records for a period of 5 years, as required in 40 CFR part 63, subpart A.

These records would be required to be maintained in such a manner that they can be readily accessed and are suitable for inspection within 2-hours time. This proposed record retention policy does not specify onsite or offsite retention periods because we assume that sources primarily use electronic archival systems that can be easily accessed from on site, whether the archive exists on or off site. This will provide more flexibility for sources regulated under 40 CFR part 63 while maintaining enforceability of the rule. This would allow the use of hard copy or electronic storage technologies that enable offsite data to be quickly retrieved by the site for independent review. For sources regulated under 40 CFR part 60 and 40 CFR part 61, this proposed recordkeeping provision could represent a longer total record retention period of 5 years rather than 2 years, but would allow shorter onsite record retention. For many sources regulated under 40 CFR part 60 and 40 CFR part 61, this proposed record retention requirement represents a burden reduction compared to the title V program, which requires onsite record retention for 5 years.

7. What are my general reporting requirements?

We propose adding 40 CFR 65.225 to subpart H to consolidate and make consistent the reporting provisions in 40 CFR parts 60, 61 and 63. We considered the level of reporting that would be required for sources regulated under the Uniform Standards according to the periodic reporting requirements of the existing rules and the title V program. Many sources are subject to numerous periodic reports under various 40 CFR parts 60, 61 and 63 subparts, as well as under the title V program. Petroleum refineries, for example, are required to prepare periodic reports under multiple regulations. For example, petroleum refineries can be subject to regulations, such as subparts G, R, CC, UU and UUU of 40 CFR part 63, subparts Kb, R, VV, XX, GGG and QQQ of 40 CFR part 60 and subparts V, Y, BB and FF of 40 CFR part 61, in addition to title V reporting requirements. All of these regulations have requirements for periodic reporting, most commonly, semiannual reporting. The NESHAP for petroleum refineries, 40 CFR part 63, subpart CC, includes provisions for emission units that are subject to more than one regulation and the rule provides direction regarding which rule the source should follow to address the overlapping requirements. However, this guidance only applies when more than one rule applies to a given emission unit; the guidance does not address situations when several rules apply to the source, but there is no overlap of requirements for a given emission unit. For example, there is no guidance provided for situations, such as a source with a storage tank subject to 40 CFR part 61, subpart Y, another tank subject to 40 CFR part 60, subpart Kb and third tank subject to 40 CFR part 63, subpart CC. For this example, the source is required to know the details of the recordkeeping and reporting requirements for all three rules and submit periodic reports according to the requirements of each rule.

As discussed in section II.D of this preamble, having the Uniform Standards with different subparts referencing its use provides for a significant burden reduction due to the consolidation of requirements. Although the report content would be the same for a given emission point type, the reporting schedule is dictated by the referencing subpart; therefore, a source subject to the Uniform Standard under multiple referencing subparts applicable to different emission points could still be subject to multiple periodic reports on different reporting schedules. However, we have included in proposed subpart H, provisions modeled from the 40 CFR part 63 General Provisions, allowing adjustments to reporting schedules to arrange the reports on a consistent schedule, including 40 CFR part 70 or 40 CFR part 71 operating permit semiannual reports.

Types of reports. To consolidate and make consistent the reporting requirements under the Uniform Standards, proposed 40 CFR 65.225 groups notifications and reports into four categories: (1) Notification of Compliance Status, (2) semiannual periodic reports, (3) annual periodic reports and (4) other notifications and reports. Consolidating the reporting requirements as described in this section will make it easier for you to comply with the rule and for the EPA to enforce and review these provisions in the future.

In an effort to streamline the reporting requirements and reduce burden, we are proposing semiannual and annual periodic reports, based on whether the reporting elements are deviations or non-deviations. We considered whether it would be appropriate to eliminate periodic reports under the Uniform Standards because sources are required to document all deviations in 40 CFR part 70 or 40 CFR part 71 operating permit semiannual reports, which must also be documented in reports for the underlying rules. However, some reporting elements in the periodic reports required under existing rules are not reporting deviations. For example, periodic reports include, as applicable, reports on LDAR monitoring (such as number of equipment tested and number of leaking equipment found), new operating scenarios developed for batch operations and the associated parameter monitoring and reports on process changes. In order to address the differences between non-deviation reporting elements and to assure the appropriate level of detail for deviations, we have segregated the reporting elements into deviation and non-deviations. For non-deviation reporting elements, we are proposing that they be submitted annually in hardcopy. We have determined that annual reporting of non-deviation elements is sufficient to ensure compliance under the Uniform Standards, and anticipate that requiring these reporting elements annually, as opposed to semiannually, will create a burden reduction for industry (see section VII.D of this preamble).

Although we have maintained semiannual reporting for the deviation reporting elements in the Uniform Standards, we are proposing that they be electronically entered in the CEDRI (rather than submitted by other means). The electronic reporting system will allow owners and operators to create copies of any deviation reports they would need to submit in a 40 CFR part 70 or 40 CFR part 71 operating permit semiannual report to the permit authority. This would provide an additional burden reduction for industry, as discussed in section VII.D of this preamble.

We are proposing that the Notification of Compliance Status Reports for 40 CFR part 65, subparts I and J be submitted electronically; the Notification of Compliance Status Reports for 40 CFR part 65, subpart M would be submitted in hard copy. We are not requiring electronic submittal of the Notification of Compliance Status Report for subpart M because it contains reporting elements that contain a high level of detail and description. As discussed in section II.F of this preamble, we have determined that these reporting elements would not be easily incorporated into the electronic reporting system at this time.

The category of ''other'' notifications and reports was created to group together reports that are not part of the Notification of Compliance Status or periodic compliance reports. This group includes notifications and reports: (1) Submitted initially prior to the initial compliance demonstration; (2) that must be submitted only if you request to use alternative methods or procedures from

those specified in the proposed rule (*e.g.,* request to use alternative test method); and (3) that are needed to be submitted for certain situations (*e.g.,* notification of performance test; changes in continuous monitoring system (CMS), processes or controls; new operating scenarios for batch operations). Except for performance test and CEMS performance evaluation reports, ''other'' reports would be submitted in hard copy.

We have included provisions that would require you to report any changes in CMS, processes or controls, or new operating scenarios for batch operations that differ from what has been previously reported (either in the Notification of Compliance Status or a subsequent report) within 30 days of making the change. We must be notified of these changes because they could be germane to the determination of a deviation, such as a deviation of an operating parameter under a new operating scenario, which was employed following the last report. In this instance, the agency would need to know the parameters against which to evaluate the deviation, as established under the updated operating scenario.

Schedule. Proposed 40 CFR 65.225 also establishes a schedule for submitting the initial Notification of Compliance Status and semiannual and annual periodic reports. The Notification of Compliance Status for each regulated source would be required to be reported within 240 days after the applicable compliance date specified in the referencing subparts, or within 60 days after the completion of the initial performance test or initial compliance determination, whichever is earlier. We are requiring an annual periodic report containing non-deviation reporting elements. Reporting of deviations required by the Uniform Standards would be reported electronically with the semiannual periodic report.

Report nomenclature. Currently, the 40 CFR parts 60, 61 and 63 General Provisions refer to the same report using different nomenclature, and these differences would hamper our efforts to specify, in 40 CFR part 65, subparts I through M, requirements related to this report. For example, the initial compliance report is referred to in the 40 CFR parts 60, 61 and 63 General Provisions as a ''summary report'' (40 CFR 60.7(d)), ''compliance status information'' (40 CFR part 61, appendix A) and a ''Notification of Compliance Status'' (40 CFR 63.9(h)), respectively. In proposed 40 CFR 65.225, this initial report is renamed for all sources complying with the Uniform Standards, and is referred to as the ''Notification of Compliance Status.'' Using one name for this report for sources regulated under all three parts of title 40 will facilitate efforts to specify requirements related to this report in the proposed Uniform Standards in 40 CFR part 65, subparts I through M.

This same approach to standardizing report names has been applied to periodic compliance reports and certain other reports. The proposed Uniform Standards refer to the periodic compliance report as the ''annual periodic report'' or ''semiannual periodic report,'' which standardizes the name for the ''excess emission and continuous monitoring system performance report'' and ''summary report'' in 40 CFR part 63, the ''excess emissions and monitoring systems performance report'' and ''summary report form'' in 40 CFR part 60 and the ''compliance status information'' form in 40 CFR part 61, appendix A.

Likewise, we propose making consistent, where appropriate, the content of these similar reports in 40 CFR parts 60, 61 and 63 for the semiannual and annual periodic reports and other notifications and reports under the Uniform Standards. For example, the 40 CFR parts 60, 61 and 63 general provisions for periodic compliance reporting include reporting provisions that are similar in intent, but slightly different in content, and this discrepancy between the General Provisions complicates our efforts to specify reporting requirements in 40 CFR part 65, subparts I, J and M. The proposed ''semiannual periodic report'' and ''annual periodic report'' incorporate elements of the ''excess emission and continuous monitoring system performance report'' and ''summary report'' in 40 CFR part 63, the ''excess emissions and monitoring systems performance report'' and ''summary report form'' in 40 CFR part 60 and the ''compliance status information'' form in 40 CFR part 61, appendix A. We are also updating the contents of the semiannual and annual periodic reports by adding provisions for closed vent systems, batch operations and process changes. Refer to section V.B of this preamble for further discussion on this topic.

Other report consolidation. We are proposing to consolidate certain 40 CFR part 60, 61 and 63 general provisions that specify the technical contents of reports (*e.g.,* submittal of test plan and performance evaluation test plan), and we have determined that these provisions would best be aggregated with the monitoring, performance testing and/or reporting requirements of 40 CFR part 65, subpart M, instead of in subpart H. It will be easier for sources to locate and understand these requirements if they are included in subpart M with related testing and monitoring requirements. Combining similar requirements together would benefit both the public and private sector by simplifying compliance and enforcement. Refer to section V.B of this preamble for further discussion of this topic.

We have consolidated the reporting requirement to submit a request for alternative monitoring. The general provisions for 40 CFR parts 60, 61 and 63 all allow alternative monitoring, but 40 CFR part 60 and 40 CFR part 61 do not provide a procedure for submitting such a request. We proposed to apply the procedure specified in the 40 CFR part 63 General Provisions to all sources subject to the Uniform Standards. This proposed revision is discussed further in section VI.B.7 of this preamble. Consolidating these provisions in subpart H would provide a consistent method for requesting monitoring alternatives for all referencing subparts, adding flexibility and simplifying compliance for sources regulated under the Uniform Standards.

Where we have determined that certain reporting requirements in the 40 CFR parts 60, 61 and 63 General Provisions do not apply to the Uniform Standards, we have excluded these provisions from 40 CFR part 65, subparts H through M. For example, the 40 CFR parts 60, 61 and 63 general provisions applicable to opacity and visible emissions are not included in proposed 40 CFR 65.225 because the Uniform Standards do not address opacity and visible emissions standards. We have also not included provisions from 40 CFR part 63 related to the SSM plan and associated recordkeeping and reporting, based on the Court decision that emissions limitations under CAA section 112 must apply at all times, even during periods of SSM (see section VI.B.5 of this preamble). Although the SSM plan and recordkeeping and reporting requirements were not specifically vacated by the Court, they no longer serve the original purpose of making sure the source follows good pollution control measures during periods of SSM in return for not being in violation.

We have removed provisions that required recordkeeping and reporting for actions taken during periods when a deviation occurs. These measures, which were previously included in periodic reports existing under 40 CFR part 60 and 40 CFR part 63, required that sources document and report the corrective actions taken when a

deviation occurs, the measures adopted to correct the deviation, the nature of the repairs or adjustments to the CMS and a description of the cause of the deviation. Additionally, these provisions required more detailed reporting, such as the identification of the cause (*e.g.,* the monitoring equipment malfunction process upset, control device upset, etc.) of each period of excess emissions and parameter monitoring exceedances. The reporting elements required by these provisions are elements that were previously established as part of SSM requirements. Although we are not requiring recording or reporting of these elements as part of the semiannual periodic report, sources may wish to collect and maintain this information for EPA and corporate review in the case of an exceedance of an emission standard. Further requirements for periods of deviation will be addressed by the referencing subpart in the manner appropriate for each source category; these requirements will be established during the development of the referencing subpart.

Reporting impacts. The consolidation of reporting requirements, as discussed in this section, will create a simplified, consistent method for reporting that may be applied to multiple source categories. We anticipate that these revised requirements will improve understanding, facilitate compliance and reduce the burden associated with reporting for multiple regulations. We have estimated that reducing the reporting frequency for some reporting elements to annual; allowing semiannual periodic reports to be submitted on a consistent schedule; and converting to electronic reporting for certain reporting elements would provide a reporting burden reduction of 42 to 59 percent to typical chemical plants and refineries (see sections VI.B.6 and VII.D of this preamble for more information).

8. How do I request a waiver for recordkeeping and reporting requirements?

We are proposing that 40 CFR 65.235 be added to subpart H to provide a procedure for sources regulated under 40 CFR part 60 and 40 CFR part 61 (as well as 40 CFR part 63) to apply for and obtain approval for a recordkeeping or reporting waiver request. This proposed procedure for requesting a waiver is currently provided in the General Provisions for 40 CFR part 63, subpart A, but is not provided in the General Provisions for 40 CFR part 60 or 40 CFR part 61. 40 CFR 61.11 does provide provisions for a waiver of compliance, but does not specifically address a waiver of recordkeeping and reporting. We propose that sources regulated under 40 CFR part 61 submit the proposed application for a waiver of recordkeeping or reporting with the application requesting a waiver of compliance under 40 CFR 61.11. Applying this 40 CFR part 63, subpart A procedure to all sources referred to the Uniform Standards would add flexibility and simplify compliance and enforcement for sources regulated under the Uniform Standards.

9. How do I request alternative monitoring methods?

We propose that 40 CFR 65.240 be added to subpart H to provide a procedure for requesting alternative monitoring methods, including major, minor and intermediate changes to monitoring methods. The allowance to request alternative monitoring is currently provided in the 40 CFR parts 60, 61 and 63 General Provisions, but the 40 CFR part 60 and 40 CFR part 61 General Provisions (*i.e.,* see 40 CFR 60.13(h)(3)(i) and 61.14(g)(1)) do not provide a procedure for application and approval of such requests. Applying the 40 CFR part 63 general provisions procedure (see 40 CFR 63.8(f)(4)(ii)), with minor clarifying revisions to all sources referred to the Uniform Standards would provide a consistent method for requesting monitoring modifications and alternatives for all referencing subparts, adding flexibility and simplifying compliance for sources regulated under the Uniform Standards.

10. How do I request a waiver for performance testing requirements?

40 CFR 65.245 is proposed to be added to subpart H to provide a procedure for requesting a performance test waiver. This procedure is currently provided in the 40 CFR part 63 General Provisions, but is not provided in the 40 CFR part 60 General Provisions. The 40 CFR part 61 General Provisions (*i.e.,* 40 CFR 60.8(b)) do allow a waiver for performance tests, but do not provide a procedure for application and approval.

Applying this 40 CFR part 63 general provisions procedure to all sources referred to the Uniform Standards would update these provisions for sources regulated under 40 CFR part 60 and 40 CFR part 61 and benefit both the public and industry by simplifying compliance for and enforcement of sources regulated under the Uniform Standards.

11. How do I request to use an alternative test method?

We propose that 40 CFR 65.250 be added to subpart H to provide a procedure for requesting a different test method than specified in the Uniform Standards, including standard methods not specified, alternative test methods or changes to test methods. The allowance to request alternative test methods is provided in 40 CFR parts 60, 61 and 63, subpart A, but 40 CFR part 60 and 40 CFR part 61, subpart A do not provide a procedure for application and approval of such requests. Applying this 40 CFR part 63, subpart A procedure to all sources referred to the Uniform Standards would provide sources regulated under 40 CFR part 60 and 40 CFR part 61 with more detailed instructions, simplifying compliance and enforcement of sources regulated under the Uniform Standards.

12. What are the procedures for approval of alternative means of emission limitation?

40 CFR 65.260 is proposed to be added to subpart H to specify a procedure for requesting an alternative means of emission limitation. The 40 CFR part 61 and 40 CFR part 63 General Provisions currently include such provisions. The 40 CFR part 60 General Provisions do not include such provisions; however, such provisions are included in the underlying rules of 40 CFR part 60. We are proposing to consolidate the provisions for 40 CFR part 61 and 40 CFR part 63 into proposed subpart H for sources directed to the Uniform Standards and regulated under 40 CFR parts 60, 61 and 63. The consolidated language in proposed subpart H contains the same provisions as the other general provisions requiring the source to submit a request containing information showing that the alternative means of emission limitations achieves equivalent emission reductions to the method specified in the Uniform Standards.

13. How do you determine what regulated sources are in regulated material service?

The previously proposed 40 CFR 65.275 describes procedures for determining whether a source is ''in regulated material service,'' in the event that a referencing subpart does not provide an explanation of how to determine whether a source is ''in regulated material service.'' These previously proposed requirements are based on the procedures in 40 CFR 63.180(d), which require that you determine the percent organic HAP

content using Method 18 of 40 CFR part 60, appendix A–6. We are considering, but not proposing, applying the same concepts we used in selecting the test methods allowable for performance test methods for determining whether the source is ''in regulated materials service.'' As discussed in section V.B.6 of this preamble, we are not allowing EPA Method 18, ASTM D6420–99 and EPA Method 320 as performance test methods for total regulated material because these methods only work for determining the quantity of known pollutants; therefore, you could fail to identify the ''total'' regulated material. We are requesting comment on whether it is reasonable to consider allowing Method 320 at 40 CFR part 63, appendix A in lieu of EPA Method 18 for determining whether your regulated source is in regulated materials service when the specific organic regulated material is known, and not allowing EPA Method 18 or EPA Method 320 when there are unknown HAP present. Instead, we would specify that Method 25A at 40 CFR part 60, appendix A–7 should be used to determine if the source is ''in regulated materials service.'' This proposed 40 CFR 65.275 is identical to the previously proposed 40 CFR 65.275.

14. What authorities are not delegated to the states?

We delegate implementation and enforcement authority to a state under sections 111(c) and 112(l) of the CAA. For the Uniform Standards, the delegation of these authorities would be through the referencing subparts because the proposed Uniform Standards are a set of foundational requirements that may be used to demonstrate compliance with the emissions standards specified in the referencing subpart. However, because there are certain requirements that the EPA does not delegate to the states, and some of those requirements are located in the Uniform Standards, it is important to specify their location in the Uniform Standards. 40 CFR 65.275 is proposed to be added to subpart H to specify which authorities located in the Uniform Standards would be retained by the EPA and not delegated to a state. The proposed Uniform Standards in subpart H specify that the EPA retain authority to review and approve the following: alternative means of emission limitation; recordkeeping and reporting waivers; major changes to monitoring requirements; major changes to test methods; and using standard EPA test methods other than those listed in the Uniform Standards. This proposed list of authorities is consistent with the list of retained authorities specified 40 CFR parts 60, 61 and 63.

15. How do I determine compliance with periodic requirements?

The proposed National Uniform Emission Standards for Heat Exchangers (40 CFR part 65, subpart L), signed by the EPA Administrator on November 30, 2011 (77 FR 960, January 6, 2012), included guidance on the timing of periodic requirements, including a minimum amount of time that must pass between consecutive instances, or ''reasonable intervals.'' We provided reasonable intervals for weekly, monthly, quarterly, semiannual and annual requirements in proposed 40 CFR part 65, subpart L, and those intervals have not changed. In the process of developing the Uniform Standards, we have added periodic requirements using additional time frames. Therefore, we are proposing to add additional reasonable intervals for requirements that occur bimonthly, three times per year and biennially (*i.e.,* every 2 calendar years). We are proposing that the reasonable interval for bimonthly requirements would be 20 days, which is roughly halfway between the reasonable intervals for monthly and quarterly requirements. Requirements that must be completed ''three times per year'' are less defined in terms of a calendar period, but if the three events were evenly spaced throughout a year, they would occur about 120 days apart. We are proposing that the reasonable interval for ''three times per year'' would be 40 days, which is consistent with the reasonable intervals of about one-third of the calendar period that we proposed previously for requirements that occur quarterly or less frequently. Finally, we are proposing that for provisions that you are required to complete biennially, you would repeat those events every other calendar year. (For example, if you are required to monitor valves subject to 40 CFR part 65, subpart J biennially, and you complete the first monitoring event in January of 2014, you would be required to complete the next monitoring event on or after January 1, 2016, and on or before December 31, 2016.) This provision has the effect of requiring you to schedule each event between about 1 to 3 calendar years after the previous event. We request comment on these reasonable intervals.

16. What definitions apply to this subpart?

We are proposing definitions in subpart H for certain types of units that appear in multiple Uniform Standards, so that those terms are defined consistently. Some definitions modeled from subpart SS, UU and WW of part 63 have been revised in the proposed subpart H for clarification or applicability purposes. Refer to sections III through V of this preamble for discussions about issues related to the proposed definitions.

VII. Impacts of the Proposed Rule

The Uniform Standards provide only operational, compliance monitoring, recordkeeping and reporting requirements that would not apply to any specific source category unless and until made applicable in a subsequent rulemaking for that source category referencing the Uniform Standards; therefore, it is most appropriate to present nationwide impacts for a referencing subpart during proposal or promulgation of that subpart when the emission standards are established for a given source category and when the decision of whether to refer to the Uniform Standards (and with what modifications) is made. The referencing subpart will provide the specific applicability of the Uniform Standards and an estimate of the number of sources and emission units for the given source category. Using the estimated numbers of regulated units, the nationwide impacts can be clearly calculated and presented.

In order to provide sufficient information on the proposed Uniform Standards for comment review, we are presenting costs on a unit basis for the proposed monitoring requirements that have not been included in previous rules. Many of the requirements in the Uniform Standards are the same or are similar to previous rules and do not represent changes that will translate into a cost increase from current rules applicable to the chemical industry. Although the Uniform Standards are intended to reduce the overall burden for facilities, some of the proposed changes could cause an increase in costs. This section provides a discussion of these costs and any cost increases that could be associated with the compliance requirements of the Uniform Standards when they are applied through a referencing subpart.

A. What are the cost increases associated with requirements proposed in 40 CFR part 65, subpart I?

Generally, costs will be the same or lower for the 40 CFR part 65, subpart I standards. The proposed requirement to control emissions from degassing certain storage vessels will increase costs, as described in section III of this preamble. The proposed requirement to install monitoring devices and alarms to

alert operators of impending floating roof landing and overfill will add costs for facilities that do not already have such devices. The EPA Method 21/optical gas imaging instrument monitoring of fixed roofs will be more costly than visual inspections.

B. What are the cost increases associated with requirements proposed in 40 CFR part 65, subpart J?

There are two new provisions in the Uniform Standards for Equipment Leaks that are expected to increase costs compared to current rules. As described in section IV.B.1 of this preamble, the first of these is annual instrument monitoring for open-ended valves and lines to ensure compliance with the requirement that the cap, blind flange, plug or a second valve properly seals the open-ended valve or line. The costs for the model plants ranged from a capital cost of $810 and an annualized cost of $180 for the simple chemical manufacturing model to a capital cost of $23,000 and an annualized cost of $5,400 for the complex refinery model.

The other provision that is expected to increase costs compared to current rules is the requirement to install electronic indicators on each PRD that would be able to identify and record the time and duration of each pressure release. These costs range from a capital cost of $11,000 and an annualized capital cost of $1,600 for the simple chemical manufacturing model to a capital cost of $130,000 and an annualized capital cost of $19,000 for the complex refinery model. Additional details on the calculation of these costs are provided in the technical memorandum entitled *Analysis of Emission Reduction Techniques for Equipment Leaks,* in Docket ID No. EPA–HQ–OAR–2010–0869.

C. What are the cost increases associated with requirements proposed in 40 CFR part 65, subpart M?

We are providing a summary of the cost impacts of the proposed 40 CFR part 65, subpart M monitoring requirements in which the expected impacts will change from the typical monitoring requirements in past rules, including adsorbers, biofilters, bypasses and reporting requirements. We do not anticipate other cost impacts that would differ from those established in current regulations. We provide a summary of the costs for the proposed monitoring and reporting requirements in sections VII.C.1 through VII.C.3 of this preamble. Additional information regarding monitoring costs for closed vent system and control devices, including small boilers and process heaters, oxidizers, absorbers, adsorbers, condensers, biofilters, sorbent injection and fabric filters can be located in the technical memorandum, *Development of Monitoring Cost Estimates for the Proposed Part 65 Uniform Standards for Control Devices—Subpart M,* in Docket ID No. EPA–HQ–OAR–2010–0868.

1. What are the cost increases associated with adsorber requirements proposed in 40 CFR part 65, subpart M?

The proposed monitoring for adsorbers, both regenerative and non-regenerative, includes some requirements that are new to the typical chemical sector regulation. Table 16 of this preamble provides a list of the proposed monitoring provisions for adsorbers that have not been typically included in previous chemical sector regulations.

TABLE 16—CAPITAL AND ANNUALIZED COSTS FOR PROPOSED ADSORBER MONITORING REQUIREMENTS IN 40 CFR PART 65, SUBPART M

Control	Monitoring	Total capital costs ($)	Total annualized costs ($)
Regenerative Adsorbers	Frequency monitor	.....	5,950
	Verification monitoring	.....	5,950
	Weekly checks on outlet concentration	9,200	3,700
	Corrective action plan	.....	3,400
Non-regenerative Adsorbers	Checks on outlet concentration (costs assume an average of weekly monitoring).	9,200	3,700

As stated previously in section V.B.3 of this preamble, these monitoring requirements are important to assess whether the adsorbers are operating properly. It is difficult to estimate emissions reductions that can be attributed to these additional costs. Other than the weekly outlet concentration tests, the additional monitoring checks are designed to check for a situation that can occur, but may not for a given adsorber. If, for example, the valve sequencing of a regenerative adsorber is sluggish and the timing is not correct, the emissions reduced by the adsorber could degrade significantly. The weekly checks on the outlet concentration and associated corrective action plan for regenerative adsorbers ensure that degradation of the adsorbent, fouling or channeling is detected in a timely manner. A period of time with inadequate adsorbent would significantly reduce the emissions reductions of the adsorber. Although the degradation of the adsorbent is an anticipated event, the adsorbent life can vary with actual use; therefore, a schedule to check the outlet concentration is important to make sure that the adsorber does not operate with degraded adsorbent and can control emissions to meet the requirements of the referencing subpart.

Few past rules have included provisions for adsorbers regenerated offsite; therefore, any monitoring for non-regenerative adsorbers is additional monitoring or new for chemical sector rules. The proposed monitoring for this type of control, outlet concentration measurement, is low cost, especially considering that this is the only monitoring that is necessary for this control.

2. What are the cost increases associated with biofilter requirements proposed in 40 CFR part 65, subpart M?

Although the MON requires monitoring the temperature of the biofilter bed, we are proposing additional monitoring for moisture and pressure drop. The estimated additional costs for monitoring these parameters are included in Table 17 of this preamble.

TABLE 17—CAPITAL AND ANNUALIZED COSTS FOR PROPOSED BIOFILTER MONITORING REQUIREMENTS IN SUBPART M

Control	Monitoring	Total capital costs ($)	Total annualized costs ($)
Biofilters	Moisture content	5,400	7,100
	Pressure drop	6,400	7,400

Although the MON only allows the biofilter as a control option for batch operations, we are proposing to allow the control option for emissions from either a batch or continuous operation. To meet the additional emissions reductions usually associated with continuous operations, we have added monitoring for moisture and pressure drop to ensure good performance of the biofilter. The costs for the additional monitoring are reasonable given the added assurance of good performance achieved by including this monitoring.

3. What are the cost increases associated with bypass monitoring requirements proposed in 40 CFR part 65, subpart M?

Bypass monitoring has been a requirement of closed vent system provisions in many past regulations. However, PRD needed for safety purposes, low leg drains, high point bleeds, analyzer vents and open-ended valves or lines were previously not subject to the bypass line requirements to have a flow monitor or a car seal on each bypass line that could divert a vent stream to the atmosphere. Given the recent *Sierra Club* v. *EPA* decision vacating the 40 CFR part 63 General Provisions' exemption from emission standards during periods of SSM (see section VI.B.5 of this preamble), these equipment would be subject to this monitoring when directed to the Uniform Standards from a referencing subpart. See the discussion under section VII.B of this preamble.

D. What are the cost impacts associated with the proposed reporting requirements for the Uniform Standards?

In our survey of existing regulations for the development of the Uniform Standards, we determined that many petroleum refineries and chemical plants are subject to numerous and duplicative recordkeeping and reporting requirements under various 40 CFR parts 60, 61 and 63 subparts, as well as under the title V program. We have estimated a total recordkeeping and reporting burden for a typical refinery subject to current rules of about $106,000, with a burden of approximately $52,800 for the required reporting. For an example chemical plant, we have estimated a total recordkeeping and reporting burden of approximately $66,900 for the current rules, with a burden of about $16,000 for the current required reporting. In order to reduce burden to industry, while retaining the reporting requirements needed to monitor compliance, we are proposing annual periodic reporting for some reporting elements and we are proposing to accept semiannual reporting data elements electronically, as discussed in sections II.F and VI.B.7 of this preamble. We anticipate that the proposed reporting requirements will reduce the burden of reporting for a typical refinery by 59 percent. This would represent a burden reduction of about $31,400 for reporting burden, and a total burden reduction of 30 percent for a typical refinery. For a typical chemical plant, we anticipate that the proposed requirements will reduce the burden of reporting by 42 percent. This would represent a burden reduction of $6,780 per year for reporting, and would represent a total burden reduction of 10 percent for a typical chemical plant. However, there will be some burden for a source to initially set up their facility in the electronic reporting system. We estimated set up costs for the example refinery and chemical plant as $5,300 and $2,700, respectively. See technical memorandum, *Comparison of Reporting Burden between Hardcopy Reports Submitted under Existing Rules and Electronic Reports Submitted for Uniform Standards,* in Docket ID No. EPA–HQ–OAR–2010–0868 for additional information. These burden reductions are estimates based on two model sources; we will be refining these estimates and developing estimates associated with all electronic reporting users. These estimates will be presented in the preamble for the electronic reporting rule proposal. For a discussion of the electronic reporting, see section II.F of this preamble.

VIII. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a ''significant regulatory action'' under the terms of Executive Order 12866 (58 FR 51735, October 4, 1993) and is, therefore, not subject to review under Executive Order 12866 and Executive Order 13563 (76 FR 3821, January 21, 2011).

Executive Order 13563 (76 FR 15859, March 22, 2011) directs each federal agency to ''periodically review its existing significant regulations to determine whether any such regulations should be modified, streamlined, expanded, or repealed so as to make the agency's regulatory program more effective or less burdensome in achieving the regulatory objectives.'' Through this proposal, the EPA is responding to Executive Order 13563 by presenting steps to increase the ease and efficiency of data submittal and improve data accessibility.

Specifically, the EPA is proposing that owners and operators of facilities affected by this proposal electronically submit certain specified compliance reports to the EPA. Electronic data reporting informs a number of our programs and offers several advantages over traditional paper reporting. First, electronic reporting provides the agency easy and routine access to the data needed to review and evaluate our regulations. This results in fewer future ICR, thereby saving both industry and the agency time and resources. In addition, electronic reporting of emissions data will allow the agency to develop and update emissions factors on a timelier basis. Finally, electronic reporting informs our compliance program and allows easier identification of compliance issues.

Executive Order 13563 requires the EPA to evaluate current regulatory decisions to help generate a more transparent review process. We believe that, through this proposal, electronic reporting and data collection will provide a more effective and less burdensome approach to recordkeeping

and reporting and is consistent with Executive Order 13563. The EPA prepared an additional analysis of the potential costs and benefits associated with this action. This analysis is contained in section VII of this preamble.

B. Paperwork Reduction Act

This action does not impose an information collection burden under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501, *et seq.* Burden is defined at 5 CFR 1320.3(b). The proposed Uniform Standards only provide thresholds, emissions reductions requirements, control options, testing, monitoring, recordkeeping and reporting requirements that would become applicable to a particular source category only if, and when, a future rulemaking for that source category references the Uniform Standards. The information collection burden of the Uniform Standards on a given source category cannot be determined until the Uniform Standards are referenced in a future rulemaking. Upon proposal of a rule that references the Uniform Standards, a determination of the burden estimate and an assessment for costs, economic impacts and other impacts, as appropriate, would be conducted.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations and small governmental jurisdictions.

For purposes of assessing the impacts of this proposed action on small entities, small entity is defined as: (1) A small business, as defined by the Small Business Administration regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise that is independently owned and operated and is not dominant in its field.

After considering the economic impacts of this proposed rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. This proposed rule will not directly impose any requirements on any entities, including small entities. There are no entities subject to this proposed rule unless and until the Uniform Standards are referenced in future rulemakings for particular source categories. We continue to be interested in the potential impacts of the proposed rule on small entities and welcome comments on issues related to such impacts.

D. Unfunded Mandates Reform Act

This action contains no federal mandates under the provisions of title II of the Unfunded Mandates Reform Act of 1995 (UMRA), 2 U.S.C. 1531–1538 for state, local or tribal governments or the private sector. This rule does not contain a federal mandate that may result in expenditures of $100 million or more for state, local and tribal governments, in the aggregate, or the private sector in any one year. The Uniform Standards will not apply to any source category until future rulemakings under 40 CFR part 60, 61 or 63 reference their use. Thus, this rule is not subject to the requirements of sections 202 or 205 of UMRA.

This action is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. Upon proposal of a rule that references the Uniform Standards, consideration will be made whether that rule exceeds $100 million or more for state, local and tribal governments or presents a significant impact on small government entities.

E. Executive Order 13132: Federalism

This proposed rule does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. The Uniform Standards will not apply to any source category until a future rulemaking under 40 CFR part 60, 61 or 63 references their use; therefore, the proposed Uniform Standards do not impose substantial direct compliance costs on state or local governments. Thus, Executive Order 13132 does not apply to this proposed rule. Upon proposal of a rule that references the Uniform Standards, consideration will be made whether that rule has federalism implications. In the spirit of Executive Order 13132, and consistent with EPA policy to promote communications between the EPA and state and local governments, the EPA specifically solicits comment on this proposed rule from state and local officials.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This proposed rule does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). It will not have substantial direct effects on tribal governments, on the relationship between the federal government and Indian tribes or on the distribution of power and responsibilities between the federal government and Indian tribes, as specified in Executive Order 13175. The proposed Uniform Standards do not directly impose requirements on owners and operators of specified sources or tribal governments, but will be referred to in future rulemakings, as discussed in section II of this preamble. If any industries that are owned or operated by tribal governments may be referenced to the Uniform Standards by another subpart in the future, the effect of this proposed rule on communities of tribal governments would not be unique or disproportionate to the effect on other communities. Thus, Executive Order 13175 does not apply to this proposed rule. The EPA specifically solicits additional comment on this proposed rule from tribal officials.

G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

The EPA interprets Executive Order 13045 (62 FR 19885, April 23, 1997) as applying only to those regulatory actions that concern health or safety risks, such that the analysis required under section 5–501 of the Executive Order has the potential to influence the regulation. This action is not subject to EO 13045 because it does not establish an environmental standard intended to mitigate health or safety risks.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

The proposed rule is not a ''significant energy action'' as defined in Executive Order 13211 (66 FR 28355, May 22, 2001), because it is not likely to have a significant adverse effect on the supply, distribution or use of energy. The proposed Uniform Standards provide testing, monitoring, recordkeeping and reporting requirements only and do not specify applicability thresholds or emissions reduction performance requirements

that would have significant adverse energy impacts. The energy impacts of the proposed Uniform Standards would be determined when the standards are referenced in a future rulemaking. Therefore, we conclude that the proposed rule, when implemented, is not likely to have a significant adverse effect on the supply, distribution or use of energy.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA) Public Law 104–113, (15 U.S.C. 272 note) directs the EPA to use voluntary consensus standards (VCS) in its regulatory activities, unless to do so would be inconsistent with applicable law or otherwise impractical. VCS are technical standards (e.g., materials specifications, test methods, sampling procedures and business practices) that are developed or adopted by VCS bodies. NTTAA directs the EPA to provide Congress, through the Office of Management and Budget, explanations when the agency decides not to use available and applicable VCS. This proposed rulemaking involves technical standards. The EPA cites the following standards: Methods 1, 1A, 2, 2A, 2C, 2D, 2F, 2G, 3, 3A, 3B, 4, 5, 18, 21, 22, 23, 25A, 26, 26A, 27, 29, 201A, 202, 301 and 320 of 40 CFR part 60, appendix A. Consistent with the NTTAA, the EPA conducted searches to identify VCS in addition to these EPA methods. No applicable VCS were identified for EPA Methods 1A, 2A, 2D, 2F, 2G, 21, 22, 27, 201A or 202. The search and review results are in the docket for this rule. The search identified six VCS as acceptable alternatives to EPA test methods for the purpose of this rule. The method, ASME PTC 19.10–1981, *Flue and Exhaust Gas Analyses* (incorporated by reference-see proposed 40 CFR 65.265), is cited in this rule for its manual method for measuring the oxygen, carbon dioxide and carbon monoxide content of the exhaust gas. This part of ASME PTC 19.10–1981 is an acceptable alternative to EPA Methods 3A and 3B for the manual procedures only, and not the instrumental procedures. The VCS, ASTM D6420–99 (2010), *Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry* (incorporated by reference-see proposed 40 CFR 65.265), was designated an acceptable alternative to EPA Method 18. Likewise, the VCS, *National Institute for Occupational Safety and Health (NIOSH) Method 2010 ''Amines, Aliphatic,* is acceptable as an alternative for EPA Method 18 only for trimethylamine (CAS 121–44–8) at iron foundries.

The VCS, ASTM D6735–01, *Standard Test Method for Measurement of Gaseous Chlorides and Fluorides from Mineral Calcining Exhaust Source Impinger Method,* is acceptable as an alternative to EPA Methods 26 and 26A. The VCS, ASTM D6784–2, *Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method),* is acceptable as an alternative to EPA Method 29 for mercury only. The VCS, ASTM D6348–03 (2010), *Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform (FTIR) Spectroscopy,* is acceptable as an alternative to EPA Method 320, in accordance with the conditions outlined in the memorandum, *Voluntary Consensus Standard Results for National Uniform Standards for Storage Vessels and Transfer Operations (40 CFR 65 Subpart I), National Uniform Emission Standards for Equipment Leaks (40 CFR 65 Subpart J), and National Uniform Emission Standards for Control Devices (40 CFR Subpart M)* (see Docket ID. No. EPA–HQ–OAR–2010–0868).

The search for emissions measurement procedures identified 23 other VCS that were potentially applicable for the Uniform Standards in lieu of EPA reference methods. The EPA determined that these 23 standards identified for measuring emissions of the regulated pollutants or their surrogates subject to emission standards in this proposed rule were impractical due to lack of equivalency, documentation, validation data and other important technical and policy considerations. Therefore, the EPA does not intend to adopt these standards for this purpose. The reasons for the determinations for the 23 methods are in the docket for this proposed rule. For the methods required or referenced by the proposed rules, a source may apply to the EPA for permission to use alternative test methods or alternative monitoring requirements in place of any required testing methods, performance specifications or procedures, as specified in proposed 40 CFR part 65, subpart H.

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 (59 FR 7629, February 16, 1994) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies and activities on minority populations and low-income populations in the United States.

The EPA has concluded that it is not practicable to determine whether there would be disproportionately high and adverse human health or environmental effects on minority and/or low income populations from this proposed rule. The proposed Uniform Standards only provide thresholds, emissions reduction requirements and operational, testing, monitoring, recordkeeping and reporting requirements, and are not applicable until referenced by a future rulemaking for a particular source category. The impact of the proposed rule on minority and/or low-income populations would be determined during proposal in future rulemakings that reference the Uniform Standards.

List of Subjects in 40 CFR part 65

Air pollution control, Environmental protection, Incorporation by reference, Reporting and recordkeeping requirements.

Dated: February 24, 2012.

Lisa P. Jackson,

Administrator.

For the reasons stated in the preamble, title 40, chapter I, of the Code of Federal Regulations is proposed to be amended as follows:

PART 65—[AMENDED]

1. The authority citation for part 65 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

2. Replace subpart H to read as follows:

Sec.

Subpart H—National Uniform Emission Standards General Provisions

What This Subpart Covers

65.200 What is the purpose of this subpart?
65.205 Am I subject to this subpart?
65.206 When must I comply with this subpart?

General Requirements

65.210 Am I subject to the General Provisions for part 60, 61 or 63 of this part?
65.215 What are my general requirements for complying with operation and maintenance requirements?
65.220 What are my general recordkeeping requirements?

65.225 What are my general reporting requirements?
65.235 How do I request a waiver for recordkeeping and reporting requirements?
65.240 How do I request an alternative monitoring method?
65.245 How do I request a waiver for performance testing requirements?
65.250 How do I request to use an alternative test method?
65.260 What are the procedures for approval of alternative means of emission limitation?
65.265 What methods are incorporated by reference for the Uniform Standards?
65.270 How do I determine what regulated sources are in regulated material service?

Other Requirements and Information

65.275 What authorities are not delegated to the states?
65.280 How do I determine compliance with periodic requirements?
65.295 What definitions apply to the Uniform Standards?

Table to Subpart H of Part 65

Table 1 to Subpart H of Part 65—Applicable 40 CFR Parts 60, 61 and 63 General Provisions

Subpart H—National Uniform Emission Standards General Provisions

What This Subpart Covers

§ 65.200 What is the purpose of this subpart?

The purpose of this subpart is to provide general provisions for the Uniform Standards of this part. These general provisions apply to you if a subpart of part 60, 61 or 63 of this chapter references the use of this subpart. The general provisions applicable to the referencing subpart (subpart A of part 60, 61 or 63) apply to this subpart, as specified in § 65.210. Section 65.295 contains definitions of ''uniform standards'' and ''referencing subpart,'' as well as other terms used in these Uniform Standards. The General Provisions for the Consolidated Federal Air Rule (subpart A of this part) do not apply to the Uniform Standards.

§ 65.205 Am I subject to this subpart?

You are subject to this subpart if you are an owner or operator who is subject to a referencing subpart and you have been expressly directed to comply with the uniform standards by a referencing subpart.

§ 65.206 When must I comply with this subpart?

You must comply with this subpart by the date specified in the referencing subpart that directed you to comply with this subpart.

General Requirements

§ 65.210 Am I subject to the General Provisions for part 60, 61 or 63 of this part?

You must comply with the provisions of 40 CFR part 60, subpart A; 40 CFR part 61, subpart A; and 40 CFR part 63, subpart A, as applicable, that are specified in Table 1 to this subpart. Table 1 to this subpart specifies the provisions in 40 CFR part 60, subpart A; 40 CFR part 61, subpart A; and 40 CFR part 63, subpart A that continue to apply to owners or operators of regulated sources expressly referenced to the Uniform Standards. You must comply with the provisions in Table 1 to this subpart that correspond to the referencing part. All provisions of 40 CFR part 60, subpart A; 40 CFR part 61, subpart A; and 40 CFR part 63, subpart A that are not expressly referenced in Table 1 to this subpart do not apply, and the provisions of the Uniform Standards apply instead, except that provisions that were required to be met prior to implementation of the Uniform Standards still apply.

§ 65.215 What are my general requirements for complying with operation and maintenance requirements?

(a) *Operation and maintenance requirements.* You are subject to the operation and maintenance provisions specified in paragraphs (a)(1) through (3) of this section.

(1) At all times, you must operate and maintain any regulated source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.

(2) The emission standards and established parameter ranges of the referencing subpart and of the Uniform Standards apply at all times, except during periods of non-operation of the regulated source (or specific portion thereof), as specified in paragraphs (a)(2)(i) and (ii) of this section. However, if a period of non-operation of one portion of a regulated source does not affect the ability of a particular emission point to comply with the specific provisions to which it is subject, then that emission point must comply with the applicable provisions of the Uniform Standards during the period of non-operation. For example, the degassing of a storage vessel would not affect the ability of a process vent to meet the requirements of subpart M of this part.

(i) For all Uniform Standards except subpart J of this part, periods of non-operation of the regulated source (or specific portion thereof) are those periods resulting in cessation of the emissions to which the Uniform Standards apply.

(ii) For subpart J of this part, periods of non-operation of the regulated source (or specific portion thereof) are those periods in which the lines are drained and depressurized, resulting in cessation of the emissions to which subpart J of this part applies.

(3) Operation and maintenance requirements are enforceable independent of emissions limitations or other requirements in relevant standards.

(b) *Compliance determination procedures.* The Administrator will follow the compliance determination procedures specified in paragraphs (b)(1) through (4) of this section.

(1) *Compliance with operating conditions.* For emission points that are required to perform continuous parameter monitoring, the Administrator will determine compliance with the required operating conditions for the monitored control devices by using operating parameter monitoring data.

(2) *Compliance with the requirement to maintain any regulated source in a manner consistent with safety and good air pollution control practices for minimizing emissions.* The Administrator will determine compliance with the requirements in paragraph (a)(1) of this section by evaluation of your use of acceptable operation and maintenance procedures. This determination will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, inspection of the regulated source and alternatives approved as specified in § 65.240.

(3) *Compliance with emissions standards.* Paragraphs (b)(3)(i) and (ii) of this section govern the use of data, tests and requirements to determine compliance with emissions standards.

(i) *Performance test.* The Administrator will determine compliance with emission standards of the referencing subpart and the Uniform Standards, based on the results of performance tests conducted according to the procedures specified in subpart M of this part, as applicable, unless otherwise specified in the Uniform Standards.

(ii) *Operation and maintenance requirements.* The Administrator will determine compliance with emission standards of the Uniform Standards by evaluation of your conformance with operation and maintenance requirements, including the evaluation

of monitoring data, as specified in the Uniform Standards.

(4) *Design, equipment, work practice or operational standards.* The Administrator will determine compliance with design, equipment, work practice or operational standards by the procedures specified in paragraphs (b)(4)(i) and (ii) of this section.

(i) Review of records, inspection of the regulated source and other procedures specified in the Uniform Standards.

(ii) Evaluation of your conformance with operation and maintenance requirements, as specified in paragraph (a) of this section and in the Uniform Standards.

(c) *Finding of compliance.* The Administrator will make a finding concerning a regulated source's compliance with an emission standard, design standard, work practice, operational standard or general duty requirement to maintain any regulated source in a manner consistent with safety and good air pollution control practices for minimizing emissions, as specified in paragraphs (a) and (b) of this section, upon obtaining all the compliance information required by the relevant standard (including the reports of performance test results, monitoring results and other information, if applicable), and information available to the Administrator, pursuant to paragraph (b) of this section.

§ 65.220 What are my general recordkeeping requirements?

(a) *Maintaining notifications, records and reports.* You must keep copies of notifications, reports and records required by this part for at least 5 years, except for records that reflect current operating conditions. These records and reports must be kept for 5 years after they no longer reflect current operating conditions. Examples of these records and reports include the regenerative adsorber corrective action plan required by § 65.742(e) or storage vessel capacity required by § 65.380(a).

(b) *Availability of records.* You must maintain all applicable records in such a manner that they can be readily accessed and are suitable for inspection within 2 hours after a request. Records may be maintained in hard copy or computer-readable form, including, but not limited to, on paper, computer disk, CD/DVD or magnetic tape.

§ 65.225 What are my general reporting requirements?

(a) *Required notifications and reports.* You must submit the notifications and reports specified in paragraphs (a)(1) through (4) of this section, as applicable. The notifications and reports specified in paragraphs (a)(1) through (4) of this section must meet the requirements in paragraphs (g) through (j) of this section.

(1) A Notification of Compliance Status described in paragraph (c) of this section.

(2) Semiannual periodic reports, as described in paragraph (d) of this section.

(3) Annual periodic reports, as described in paragraph (e) of this section.

(4) Other notifications and reports, as described in paragraph (f) of this section.

(b) *Responsible official.* For Notification of Compliance Status Reports, semi-annual reports, annual periodic reports, performance test reports and continuous emission monitoring system (CEMS) performance evaluation data, you must include the name, title and signature of the responsible official who is certifying the accuracy of the report and attesting to whether the source has complied with the relevant standard.

(c) *Notification of Compliance Status.* You must submit your Notification of Compliance Status, as specified in paragraphs (c)(1) and (2) of this section. The Notification of Compliance Status for subparts I and J of this part must be submitted electronically, as specified in paragraph (h) of this section and the Notification of Compliance Status for subpart M of this part must be submitted, as specified in paragraph (i) of this section.

(1) *Contents.* You must submit a Notification of Compliance Status for each regulated source subject to the Uniform Standards, containing the information specified in the applicable subparts of the Uniform Standards.

(2) *Due date.* You must submit the Notification of Compliance Status for each regulated source within 240 days after the applicable compliance date specified in the referencing subpart, or within 60 days after the completion of the initial performance test, whichever is earlier.

(d) *Semiannual periodic reports.* You must submit your periodic reports, as specified in paragraphs (d)(1) and (2) of this section. Semiannual reports must be submitted electronically as specified in paragraph (h) of this section.

(1) *Contents.* Semiannual periodic reports must include information of all deviations. A deviation includes any failure to meet a requirement or obligation under the Uniform Standards and those reporting elements specified, to be submitted in the semiannual periodic reports in the Uniform Standards.

(2) *Due date.* Semiannual periodic reports must be submitted semiannually, no later than 60 calendar days after the end of each 6-month period. The first report must be submitted, as specified in either paragraph (d)(2)(i) or (ii) of this section, as applicable.

(i) The first report must be submitted no later than the last day of the month that includes the date 8 months after the date the source became subject to this part or 6 months after the date since the last part 60, 61 or 63 periodic report was submitted for the applicable requirement, whichever is earlier.

(ii) For sources complying with the Uniform Standards at initial startup, the first report must cover the 6 months after the Notification of Compliance Status is due. The first report must be submitted no later than the last day of the month that includes the date 8 months after the Notification of Compliance Status is due.

(e) *Annual periodic report.* You must submit your annual periodic reports, as specified in paragraphs (e)(1), (2) and (i) of this section.

(1) *Contents.* Annual periodic reports must include all information specified for annual periodic reports in the Uniform Standards.

(2) *Due date.* Annual periodic reports must be submitted annually, no later than 60 calendar days after the end of each 12-month period. The first report must be submitted, as specified in either paragraph (e)(2)(i) or (ii) of this section, as applicable.

(i) The first report must be submitted no later than the last day of the month that includes the date 14 months after the date the source became subject to this part or 12 months after the date since the last part 60, 61 or 63 periodic report was submitted for the applicable requirement, whichever is earlier.

(ii) For sources complying with the Uniform Standards at initial startup, the first report must cover the 12 months after the Notification of Compliance Status is due. The first report must be submitted no later than the last day of the month that includes the date 14 months after the Notification of Compliance Status is due.

(f) *Other notifications and reports.* You must submit the reports specified in paragraphs (f)(1) through (3), and (i) of this section, as applicable.

(1) *Other reports required in this subpart.* You must submit the reports specified in paragraphs (f)(1)(i) through (iv) of this section.

(i) Any request for a waiver for recordkeeping or reporting requirements, as specified in § 65.235.

(ii) Any request for an alternative or change in monitoring or an alternative recordkeeping method, as specified in § 65.240.

(iii) Any request for a waiver for a performance testing requirement, as specified in § 65.245.

(iv) Any request to use a different method than one specified in the Uniform Standards, as specified in § 65.250.

(2) *Other reports required in subpart I of this part.* You must submit the reports specified in paragraphs (f)(2)(i) through (ii) of this section.

(i) Notification of inspection (§ 65.388(a)).

(ii) Requests for alternate devices (§ 65.388(b)).

(3) *Other reports required in subpart M of this part.* You must submit the reports specified in paragraphs (f)(3)(i) through (xi) of this section.

(i) Notification of performance test (§ 65.884(a)).

(ii) Performance test reports (§ 65.884(b)) submitted, as specified in paragraph (k) of this section.

(iii) Notification of CEMS performance evaluation (§ 65.884(c)).

(iv) CEMS performance evaluation and monitoring plan (§ 65.884(c)).

(v) CEMS performance evaluations (§ 65.884(d)) submitted, as specified in paragraph (k) of this section.

(vi) Continuous parameter monitoring system (CPMS) monitoring plan (§ 65.884(e)).

(vii) Application to substitute a prior performance test (§ 65.884(f)).

(viii) A batch precompliance report (§ 65.884(g)).

(ix) Request for approval of an alternative monitoring parameter or use of a control device other than those listed in subpart M of this part (§ 65.884(h)).

(x) Changes in continuous monitoring system, processes or controls (§ 65.884(i)).

(xi) New operating scenarios for batch operations (§ 65.884(j)).

(g) *General report content.* All notifications and reports submitted, pursuant to the Uniform Standards, including reports that combine information from the Uniform Standards and a referencing subpart, must include the information specified in paragraphs (g)(1) through (8) of this section.

(1) Company name, address and telephone number (fax number may also be provided).

(2) The name, address and telephone number of the person to whom inquiries should be addressed, if different than the owner or operator.

(3) The address (physical location) of the reporting facility.

(4) Identification of each regulated source covered in the submission.

(5) Identification of which referencing subpart is applicable to each regulated source.

(6) Identification of which Uniform Standards are applicable to that regulated source.

(7) Summaries and groupings of the information specified in paragraphs (g)(4) through (6) of this section are permitted.

(8) The date of the report.

(h) *Electronic report submittals.* You must electronically submit all semiannual periodic reports and the 40 CFR part 65, subpart I and 40 CFR part 65, subpart J portions of the Notification of Compliance Status to the Administrator using the Compliance and Emissions Data Reporting Interface (CEDRI) on or before the applicable due date.

(i) *Non-CEDRI submitted reports.* You must submit notifications and reports not required to be submitted electronically according to the procedures in paragraphs (i)(1) through (4) of this section.

(1) Notifications and reports not required to be submitted electronically under this part must be sent to the Administrator at the appropriate EPA Regional Office, and to the delegated State authority; except if you request permission to use an alternative means of emission limitation, as provided for in § 65.260, you must submit the request to the Director of the Office of Air Quality Planning and Standards (C404–04), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711. The EPA Regional Office may waive the requirement to receive a copy of any notification or report at its discretion.

(2) If any State requires a notice that contains all the information required in a notification or report listed in this part, you may send the appropriate EPA Regional Office a copy of the notification or report that you sent to the state to satisfy the requirements of this part for that notification or report.

(3) Wherever this subpart specifies ''postmark'' dates, submittals may be sent by methods other than the U.S. Mail (for example, by email, fax or courier) upon mutual agreement with the Administrator. Submittals must be sent on or before the specified date.

(4) If acceptable to both the Administrator and you, notifications and reports may be submitted on electronic media.

(j) *Adjustment to timing of submittals.* Adjustment to timing of submittals may be made according to the provisions specified in paragraphs (j)(1) through (4) of this section.

(1) *Alignment with title V submission.* You may submit semiannual periodic reports required by this part, on the same schedule as the title V periodic report for the facility. If you use this option, you need not obtain prior approval, but must assure no reporting gaps from the last semiannual periodic report for the relevant standards. You must clearly identify the change in reporting schedule in the first report after the change is made, filed under paragraph (d) of this section. The requirements of paragraph (g) of this section are not waived when implementing this change.

(2) *Request for adjustment.* You may arrange, by mutual agreement (which may be a standing agreement) with the Administrator, a common schedule on which reports required by this part must be submitted throughout the year, as long as the reporting period is not extended. If you wish to request a change in a time period or due date for a particular requirement, you must request the adjustment as soon as practical before the subject activity is required to take place. You must include in the request the information you consider to be useful to convince the Administrator that an adjustment is warranted. A request for a change to the semiannual or annual periodic reporting schedules need only be made once for every schedule change and not once for every semiannual or annual report submitted. Until an adjustment of a due date has been approved by the Administrator, you remain subject to the requirements of the Uniform Standards. For periodic reports submitted for each relevant standard, the allowance for a consolidated schedule applies beginning 1 year after the regulated source's compliance date for that standard.

(3) *Approval of request for adjustment.* If, in the Administrator's judgment, your request for an adjustment to a particular due date is warranted, the Administrator will approve the adjustment. The Administrator will notify you of approval or disapproval of the request for an adjustment within 15 calendar days of receiving sufficient information to evaluate the request.

(4) *Notification of delay.* If the Administrator is unable to meet a specified deadline, you will be notified of any significant delay and informed of the amended schedule.

(k) *Electronic submittal of performance test and CEMS performance evaluation data.* You must

submit performance test and CEMS performance evaluation data using EPA's Electronic Reporting Tool (ERT) according to the procedures in paragraphs (k)(1) through (4) of this section.

(1) Within 60 days after the date of completing each performance test required by Uniform Standards, you must submit performance test data electronically to EPA's Central Data Exchange (CDX) by using the ERT (see *http://www.epa.gov/ttn/chief/ert/index.html*). Only data collected using test methods compatible with ERT are subject to this requirement, to be submitted electronically to EPA's CDX. If a non-supported test method is used, you must submit the performance test report within 60 days, as specified in paragraph (i) of this section.

(2) If you claim that some of the information being submitted for performance tests is confidential business information (CBI), you must omit such CBI data from the electronic submissions and submit a complete ERT file, including information claimed to be CBI, on a compact disk or other commonly used electronic storage media (including, but not limited to, flash drives) to EPA by the due date specified in paragraph (j)(1) of this section. The electronic media must be clearly marked as CBI, with the company name, facility location, contact name and phone number, and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404–02, 4930 Old Page Rd., Durham, NC 27703.

(3) Within 60 days after the date of completing each CEMS performance evaluation test required by § 65.711(c), you must submit the relative accuracy test audit data electronically into EPA's CDX by using the ERT, as described in paragraph (k)(1) of this section.

(4) The Administrator or the delegated authority may request a report in any form suitable for the specific information, (e.g., by commonly used electronic media, such as spreadsheet, on CD or hard copy). The Administrator retains the right to require submittal of reports in paper format.

§ 65.235 How do I request a waiver for recordkeeping and reporting requirements?

You may request a waiver from recordkeeping or reporting according to the procedures in paragraphs (a) and (b) of this section. The Administrator will process the waiver according to the procedures in paragraphs (c) through (e) of this section. You remain subject to the reporting and recordkeeping requirements of the Uniform Standards until a waiver has been granted by the Administrator.

(a) *Waiver application.* You may apply for a waiver from recordkeeping or reporting requirements if your regulated source is achieving the relevant standard(s), or your source is operating under an extension of compliance under § 63.6(i) of this chapter, or a waiver of compliance under § 61.11 of this chapter, or you have requested an extension or waiver of compliance and the Administrator is still considering that request.

(b) *Extension of compliance request.* If an application for a waiver of recordkeeping or reporting is made, the application must accompany the request for an extension of compliance under § 63.6(i) of this chapter or the request for a waiver of compliance under § 61.10(b) of this chapter, any required compliance progress report or compliance status report required in the source's title V permit application, or a permit modification application or a periodic report required under this part, whichever is applicable. The application must include whatever information you consider useful to convince the Administrator that a waiver of recordkeeping or reporting is warranted.

(c) *Approval or denial of waiver.* The Administrator will approve or deny a request for a waiver of recordkeeping or reporting requirements when performing one of the following actions:

(1) Approves or denies an extension of compliance under § 63.6(i) of this chapter or a waiver of compliance under § 61.10(b) of this chapter.

(2) Makes a determination of compliance following the submission of a required semiannual periodic report.

(3) Makes a determination of suitable progress toward compliance following the submission of a compliance progress report, whichever is applicable.

(d) *Waiver conditions.* A waiver of any recordkeeping or reporting requirement granted under this section may be conditioned on other recordkeeping or reporting requirements deemed necessary by the Administrator.

(e) *Waiver cancellation.* Approval of any waiver granted under this section does not abrogate the Administrator's authority under the Clean Air Act or in any way prohibit the Administrator from later canceling the waiver. The cancellation will be made only after notice is given to you.

§ 65.240 How do I request an alternative monitoring method?

You may submit a request for approval to use alternatives (major, intermediate or minor changes to monitoring methods) to the monitoring provisions of the Uniform Standards, as specified in paragraphs (a) through (d) of this section.

(a) *Contents.* An application for alternative monitoring must contain the information specified in paragraphs (a)(1) through (3) of this section.

(1) Information justifying your request for an alternative monitoring method, such as the technical or economic infeasibility, or the impracticality of the regulated source using the required method.

(2) A description of the proposed alternative monitoring system that addresses the four elements contained in the definition of monitoring in § 65.295.

(3) A CEMS performance evaluation and monitoring plan, as specified in § 65.711(c) or a CPMS monitoring plan, as specified in § 65.712(c), as applicable.

(b) *Request due date.* You must submit the application for an alternative monitoring method, as specified in paragraphs (b)(1) through (3) of this section.

(1) You may submit the application at any time, provided that it is submitted with enough time prior to the compliance date specified in the referencing subpart to ensure a timely review by the Administrator in order to conduct the alternative monitoring method after the compliance date.

(2) If the alternative monitoring procedure will serve as the performance test method that is to be used to demonstrate compliance with a referencing subpart, the application must be submitted at least 60 days before the performance test is scheduled to begin and must meet the requirements for an alternative test method under § 65.250.

(3) For a request to make a minor change to monitoring, you must submit your request with your CEMS performance evaluation and monitoring plan required in § 65.711(c) or your CPMS monitoring plan required in § 65.712(c), as applicable. Approval of the plan will constitute approval of the minor change.

(c) *Approval or denial of request to use alternative monitoring.* The Administrator will notify you of approval or intention to deny approval of the request to use an alternative monitoring method within 30 calendar days after receipt of the original request and within 30 calendar days after receipt of any supplementary information that is submitted. Before disapproving any request to use an alternative method, the Administrator will notify the applicant of the Administrator's intention to disapprove

the request together with the information specified in paragraphs (c)(1) and (2) of this section.

(1) Notice of the information, and findings on which the intended disapproval is based.

(2) Notice of opportunity for you to present additional information to the Administrator before final action on the request. At the time the Administrator notifies you of the intention to disapprove the request, the Administrator will specify how much time you will have after being notified of the intended disapproval to submit the additional information.

(d) *Use of an alternative monitoring method.* Procedures applicable to sources that have requested an alternative monitoring method are specified in paragraphs (d)(1) through (3) of this section.

(1) You are subject to the monitoring requirements of the Uniform Standards, unless permission to use an alternative monitoring method has been granted by the Administrator. Once an alternative is approved, you must use the alternative for the emission points or regulated sources cited in the approval, and must meet the monitoring requirements of the Uniform Standards for all other emission points or regulated sources.

(2) If the Administrator approves the use of an alternative monitoring method for a regulated source, you must continue to use the alternative monitoring or method unless you receive approval from the Administrator to use another method.

(3) If the Administrator finds reasonable grounds to dispute the results obtained by an alternative monitoring method, requirement or procedure, the Administrator may require the use of a method, requirement or procedure specified in the Uniform Standards. If the results of the specified and alternative methods, requirements or procedures do not agree, the results obtained by the method, requirement or procedure specified in the Uniform Standards will prevail.

§ 65.245 How do I request a waiver for performance testing requirements?

You may request a waiver from the requirements to conduct a performance test by following the procedures specified in paragraphs (a) through (e) of this section. Unless and until a waiver of a performance testing requirement has been granted by the Administrator under this paragraph, you remain subject to the performance testing requirements in §§ 65.820 through 65.829.

(a) *Conditions of request.* You may apply for a waiver from the performance testing requirements specified if one or more of the conditions in paragraph (a)(1) through (3) apply.

(1) You are meeting the Uniform Standards on a continuous basis.

(2) You are operating under an extension of compliance, as specified in § 63.6(i) of this chapter.

(3) You have requested an extension of compliance, as specified in § 61.11 and the Administrator is still considering that request.

(b) *Contents of request.* The request must include information justifying your request for a waiver, such as the technical or economic infeasibility, or the impracticality of the regulated source performing the required test.

(c) *Timing of request.* The waiver application must be submitted, as specified in paragraph (c)(1) or (2) of this section.

(1) If you request an extension of compliance under § 63.6(i) of this chapter, the application for a waiver of an initial performance test must accompany the information required for the request for an extension of compliance, and must be submitted on the schedule in § 63.6(i) of this chapter.

(2) If you have not requested an extension of compliance or if you have requested an extension of compliance and the Administrator is still considering that request, the application for a waiver of a performance test must be submitted at least 60 days before performance testing would be required. The application may accompany a Notification of Compliance Status Report or semiannual periodic report, as specified in § 65.225(c) or (d).

(d) *Approval of request to waive performance test.* The Administrator will approve or deny a request for a waiver of a performance test made under paragraph (a) of this section by completing any one of the actions specified in paragraphs (d)(1) through (4) of this section.

(1) Approves or denies an extension of compliance under § 63.6(i)(8) or under § 63.11.

(2) Approves or disapproves a performance test plan under § 65.820(c).

(3) Makes a determination of compliance following the submission of a required compliance status report or periodic report.

(4) Makes a determination of suitable progress towards compliance following the submission of a compliance progress report.

(e) *Waiver cancellation.* Approval of any waiver granted under this section does not abrogate the Administrator's authority under the Clean Air Act or in any way prohibit the Administrator from later canceling the waiver. The cancellation will be made only after notice is given to you.

§ 65.250 How do I request to use an alternative test method?

You may submit a request for approval to use an alternative test method (i.e., major, intermediate or minor change to a test method, or an EPA test method other than one in the Uniform Standards), as described in paragraphs (a) through (d) of this section.

(a) *Contents of request.* Except as specified in paragraph (a)(3) of this section, you must include the information specified in paragraphs (a)(1) and (2) of this section in the request for approval to use an alternative test method.

(1) A justification for using the proposed alternative method instead of using the method specified in the Uniform Standards.

(2) Results of applying Method 301 at 40 CFR part 63, appendix A of this part to validate the alternative test method. This may include the use of only specific procedures of EPA Method 301, if use of such procedures are sufficient to validate the alternative test method.

(3) For minor changes to a test method and for EPA test methods other than those specified in the Uniform Standards, Method 301 at 40 CFR part 63, appendix A of this part is not required to validate the test method.

(b) *Timing of request.* You must submit the request to use an alternative test method at least 60 days before the performance test is scheduled to begin. However, you may submit the request well in advance of the date 60 days before the performance test is scheduled to begin to ensure a timely review by the Administrator in order for you to meet the performance test date specified in the referencing subpart. This request may be submitted as part of the performance test plan required by § 65.820.

(c) *Review of alternative test methods.* The Administrator will determine whether your validation of the proposed alternative test method is adequate and issue an approval or disapproval. If the request for approval of an alternative test method is submitted with the performance test plan, approval of the performance test plan will indicate approval of the alternative test method. The procedure for test plan approval is specified in § 65.820.

(d) *Use of alternative test method.* You must follow the provisions of paragraphs (d)(1) through (4) regarding the use of alternative test methods.

(1) If you have not received notification of approval/disapproval within 45 days after submission of the request to use an alternative method and the request satisfies the requirements in paragraphs (a) and (b) of this section, you may conduct the performance test using the alternative method.

(2) If you use an alternative test method for a regulated source during a required performance test, you must continue to use the alternative test method for subsequent performance tests at that regulated source until you receive approval from the Administrator to use another test method, as allowed under this section.

(3) If the Administrator finds reasonable grounds to dispute the results obtained by an alternative test method for the purposes of demonstrating compliance with a relevant standard, the Administrator may require the use of a test method specified in the Uniform Standards.

(4) Neither the validation and approval process nor the failure to validate an alternative test method abrogates your responsibility to comply with the requirements of the Uniform Standards.

§ 65.260 What are the procedures for approval of alternative means of emission limitation?

(a) *General procedures.* You may request a determination of equivalence for an alternative means of emission limitation to the requirements of design, equipment, work practice or operational standards of the Uniform Standards. If, in the judgment of the Administrator, an alternative means of emission limitation will achieve a reduction in regulated material emissions at least equivalent to the reduction in emissions from that source achieved under any design, equipment, work practice or operational standards (but not performance standards) in the Uniform Standards, the Administrator will publish in the **Federal Register**, a notice permitting the use of the alternative means for purposes of compliance with that requirement. Such notice will restrict the permission to the stationary source(s) or category(ies) of sources from which the alternative emission standard will achieve equivalent emission reductions.

(1) The notice may provide permission on the condition that the alternative means of emission limitation must include requirements to assure the proper operation and maintenance of equipment and practices that would be required for compliance with the alternative emission standard, including appropriate quality assurance and quality control requirements that are deemed necessary.

(2) Any such notice will be published only after public notice and an opportunity for a hearing.

(3) A manufacturer of control devices or monitoring equipment may request an alternative means of emission limitation approval for their product.

(b) *Contents of submittal.* You must include the information specified in paragraphs (b)(1) through (4) of this section in your request for alternative means of emission limitation, as applicable.

(1) In order to obtain approval, any person seeking permission to use an alternative means of emission limitation under this section must collect, verify and submit to the Administrator information showing that the alternative means achieves equivalent emission reductions. If you seek permission to use an alternative means of emission limitation and you have not previously performed testing, you must also submit the proposed performance test plan required in § 65.820(b). If you seek permission to use an alternative means of emission limitation, based on previously performed testing, you must submit the results of that testing, a description of the procedures followed in testing or monitoring and a description of pertinent conditions during testing or monitoring.

(2) If you request an alternative means of emission limitation, you must submit a description of the proposed testing, monitoring, recordkeeping and reporting that you will use and the proposed basis for demonstrating compliance.

(3) Any testing or monitoring conducted to request permission to use an alternative emission standard must be appropriately quality assured and quality controlled, as specified in § 65.820(b), as applicable.

(4) If you request the use of an alternate device for a fitting on a floating roof, as described in § 65.315(e), you must submit an application, including emissions test results and an analysis demonstrating that the alternate device has an emission factor that is less than or equal to the emission factor for the device specified in § 65.315(a). The test results must include all documentation required by the applicable test methods and documentation of monitoring during the performance test of any operating parameters on which you establish limits. The tests must be conducted using full-size or scale-model storage vessels that accurately collect and measure all regulated material emissions using a given control technique, and that accurately simulate wind and account for other emission variables, such as temperature and barometric pressure, or an engineering analysis that the Administrator determines is an accurate method of determining equivalence.

(c) *Compliance.* If the Administrator makes a determination that a means of emission limitation is a permissible alternative to the requirements of design, equipment, work practice or operational standards of the Uniform Standards, you must either comply with the alternative or comply with the requirements of the Uniform Standards, as applicable.

§ 65.265 What methods are incorporated by reference for the Uniform Standards?

The materials listed in this section are incorporated by reference in the corresponding sections of the Uniform Standards. These incorporations by reference were approved by the Director of the **Federal Register** in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. These materials are incorporated as they exist on the date of the approval, and notice of any change in these materials will be published in the **Federal Register**. The materials are available for purchase at the corresponding addresses noted in this section, and all are available for inspection at the National Archives and Records Administration (NARA), at the Air and Radiation Docket and Information Center, U.S. EPA, EPA West Building, Room 3334, 1301 Constitution Ave. NW., Washington, DC, and at the EPA Library, 109 T.W. Alexander Drive, Room C261, U.S. EPA, Research Triangle Park, North Carolina. For information on the availability of this material at NARA, call (202) 741–6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.*

(a) The following materials are available for purchase from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161, (703) 605–6000 or (800) 553–6847; or for purchase from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, (202) 512–1800.

(1) Office of Air Quality Planning and Standards (OAQPS), Fabric Filter Bag Leak Detection Guidance, EPA–454/R–98–015, September 1997 (EPA–454/R–98–015).

(2) Emissions Inventory Improvement Program, Volume II: Chapter 16, Methods for Estimating Air Emissions from Chemical Manufacturing Facilities, August 2007, Final, (EPA EIIP Volume II: Chapter 16) *http://www.epa.gov/*

ttnchie1/eiip/techreport/volume02/index.html.

(3) Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatography, *http://yosemite.epa.gov/R9/R9Testmethod.nsf*.

(b) The following materials are available for purchase from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, Pennsylvania 19428–2959, (610) 832–9585, *http://www.astm.org*.

(1) ASTM D6420–99(2010), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry.

(2) ASTM D1946–90(2006), Standard Practice for Analysis of Reformed Gas by Gas Chromatography.

(3) ASTM D4809–09a, Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter (Precision Method).

(4) ASTM D2879–95(2011), Standard Test Method for Hydrocarbon Types in Low Olefinic Gasoline by Mass Spectrometry.

(c) The following materials are available for purchase from ASME, Information Central Orders/Inquiries, P.O. Box 2300, Fairfield, New Jersey 07007–2300, (800) 843–2763, *http://www.asme.org*.

(1) ANSI/ASME PTC 19.10–1981, Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus].

(2) ASME B31.3–2010, Process Piping.

(d) The following materials are available for purchase from the National Technical Information Service (NTIS), Alexandria, Virginia 22312, (800) 553–6847, *http://www.ntis.gov*.

(1) Flammability Characteristics of Combustible Gases and Vapors, Zabetakis, M.G., U.S. Bureau of Mines, Bulletin 627, 1965.

(2) [Reserved].

(e) The following materials are available for purchase from the American Petroleum Institute (API), 1220 L Street NW., Washington, DC 20005–4070, (202) 682–8000, *http://www.api.org*.

(1) Evaporative Loss From External Floating Roof Tanks, API MPMS Chapter 19.2, September 1, 2003.

(2) [Reserved].

§ 65.270 How do I determine what regulated sources are in regulated material service?

If you are subject to a uniform standard that includes requirements for regulated sources ''in regulated material service,'' you must determine if regulated sources or equipment are in regulated material service using either paragraph (a) or (b) of this section, as applicable.

(a) If the referencing subpart includes a procedure or definition of ''in regulated material service,'' you must use the procedure or definition of ''in regulated material service'' in the referencing subpart.

(b) If the referencing subpart does not include a procedure or definition of ''in regulated material service,'' you must use the procedures specified in paragraphs (b)(1) through (3) of this section.

(1) Regulated sources or equipment that can reasonably be expected to be in regulated material service are presumed to be in regulated material service unless you demonstrate that the regulated sources or equipment are not in regulated material service.

(2) Except as provided in paragraph (b)(1) and (3) of this section, you must use Method 18 of 40 CFR part 60, appendix A–6 and either of the methods specified in paragraphs (b)(2)(i) or (ii) of this section to demonstrate that regulated sources or equipment are not in regulated material service.

(i) Determine the weight percent regulated material content of the process fluid that is contained in or contacts the regulated source as the arithmetic sum of the weight percent concentration of each compound defined as regulated material. Demonstrate that the regulated material concentration is less than 5 weight percent on an annual average basis.

(ii) Demonstrate that the non-regulated material content exceeds 95 percent by weight on an annual average basis.

(3) You may use good engineering judgment rather than the procedures in paragraph (b)(1) or (2) of this section to determine if regulated sources or equipment are not in regulated material service. However, when you and the Administrator do not agree on whether the regulated sources or equipment are in regulated material service, you must use the procedures in paragraph (b)(2) of this section to resolve the disagreement.

§ 65.275 What authorities are not delegated to the states?

In delegating implementation and enforcement authority to a state under sections 111(c) and 112(l) of the Clean Air Act, the following authorities are retained by the Administrator and not transferred to a state:

(a) In § 65.235, request for recordkeeping and reporting waiver.

(b) In § 65.240, major changes to monitoring methods.

(c) In § 65.250, major changes to test methods or a different EPA method than one specified in the Uniform Standards.

(d) In 65.260, alternative means of emissions limitation.

§ 65.280 How do I determine compliance with periodic requirements?

Except as specified in paragraph (c) of this section, if you are subject to a requirement in the Uniform Standards to complete a particular task on a periodic basis, you must comply, as described in paragraphs (a) and (b) of this section.

(a) *Periods of time.* All terms in the Uniform Standards that define a period of time for completion of required tasks (*e.g.,* daily, weekly, monthly, quarterly, annually), refer to the standard calendar periods.

(b) *Reasonable intervals.* You may comply with such periodic requirements by completing the required task any time within the standard calendar period, provided there is a reasonable interval between completion of two instances of the same task. Reasonable intervals are described in paragraphs (b)(1) through (8) of this section.

(1) Tasks that you are required to complete weekly must be separated by at least 3 calendar days.

(2) Tasks that you are required to complete monthly must be separated by at least 14 calendar days.

(3) Tasks that you are required to complete bimonthly (*i.e.,* every 2 calendar months) must be separated by at least 20 calendar days.

(4) Tasks that you are required to complete quarterly must be separated by at least 30 calendar days.

(5) Tasks that you are required to complete three times per year must be separated by at least 40 calendar days.

(6) Tasks that you are required to complete semiannually (*i.e.,* once every 2 quarters or twice per year) must be separated by at least 60 calendar days.

(7) Tasks that you are required to complete annually must be separated by at least 120 calendar days.

(8) Tasks that you are required to complete biennially (*i.e.,* once every 2 calendar years) must be completed every other calendar year.

(c) *Exceptions.* (1) Paragraphs (a) and (b) of this section do not apply to reports that you are required to submit under the General Provisions applicable to the referencing subpart (*e.g.,* subpart A parts 60, 61 or 63).

(2) If the paragraph in the Uniform Standards that imposes a periodic requirement specifies a different schedule for complying with that requirement, you must follow that

schedule instead of the requirements in paragraphs (a) and (b) of this section.

(3) Time periods may be changed by mutual agreement between you and the Administrator, as specified in § 65.225(j). For example, a period could begin on the compliance date or another date, rather than on the first day of the standard calendar period. For each time period that is changed by agreement, the revised period applies until it is changed. A new request is not necessary for each recurring period.

(4) Nothing in paragraphs (a) and (b) of this section shall be construed as prohibiting you from conducting a periodic task at a more frequent interval than required.

§ 65.295 What definitions apply to the Uniform Standards?

All terms used in the Uniform Standards have the meaning given them in the Clean Air Act, the referencing subpart and in this section. The definition in the referencing subpart takes precedence.

Alternative test method means any method of sampling and analyzing for an air pollutant other than a test method specified in the Uniform Standards. An alternative test method can include other EPA test methods that are not specified by the Uniform Standards; methods other than EPA test methods; or changes to test methods (*i.e.,* minor, intermediate or major changes to test methods). For methods other than EPA standard test methods and changes other than minor changes to test methods, you must demonstrate to the Administrator's satisfaction using Method 301 at 40 CFR part 63, appendix A, that an alternative test method produces results adequate for use in place of a test method specified in the Uniform Standards.

Atmospheric storage vessel means any storage vessel that is not a pressure vessel.

Automatic bleeder vent (or vacuum breaker vent) means a device used to equalize the pressure of the vapor space across the deck as the floating roof is either being landed on or floated off of its legs or other support devices. Typically, the device consists of a well in the deck with a cover. A guided leg is attached to the underside of the cover which comes in contact with the floor when the storage vessel is being emptied, just prior to the point that the floating roof lands on its supports. When in contact with the bottom of the storage vessel, the guided leg mechanically lifts the cover off the well. Alternatively, the device may be activated by increased pressure (or vacuum) in the vapor space below the landed floated roof that is created by changes in the liquid level while the floating roof is landed.

Barge means any vessel that transports regulated material liquids in bulk on inland waterways or at sea.

Batch emission episode means a discrete venting episode that may be associated with a single unit operation. A unit operation may have more than one batch emission episode. For example, a displacement of vapor resulting from the charging of a vessel with regulated material will result in a discrete emission episode that will last through the duration of the charge and will have an average flow rate equal to the rate of the charge. If the vessel is then heated, there will also be another discrete emission episode resulting from the expulsion of expanded vapor. Both emission episodes may occur in the same vessel or unit operation. There are possibly other emission episodes that may occur from the vessel or other process equipment, depending on process operations.

Batch operation means a noncontinuous operation involving intermittent or discontinuous feed into process vessels and, in general, involves the emptying of the process vessels after the operation ceases and prior to beginning a new operation. Addition of raw material and withdrawal of product do not occur simultaneously in a batch operation.

Boiler means any enclosed combustion device that extracts useful energy in the form of steam and is not an incinerator or a process heater.

Bottoms receiver means a tank that collects bottoms from continuous distillation before the stream is sent for storage or for further downstream processing. A rundown tank is an example of a bottoms receiver.

Breakthrough means the time when the level of regulated material detected is at the highest concentration allowed to be discharged from an adsorber system, as determined by the referencing subpart.

By compound means by individual stream components, not carbon equivalents.

Cargo tank means a liquid-carrying tank permanently attached and forming an integral part of a motor vehicle or truck trailer. This term also refers to the entire cargo tank motor vehicle or trailer. Vacuum trucks used exclusively for maintenance or spill response are not considered cargo tanks.

Car-seal means a seal that is placed on a device that is used to change the position of a valve (*e.g.,* from opened to closed) in such a way that the position of the valve cannot be changed without breaking the seal.

Catalytic oxidizer means a thermal oxidizer where the gas stream, after passing through the enclosed combustion chamber, also passes through a catalyst bed. The catalyst has the effect of increasing the oxidation reaction rate, enabling conversion at lower reaction temperatures than in thermal oxidizers.

Closed-loop system means an enclosed system that returns process fluid to the process and is not vented directly to the atmosphere.

Closed-purge system means a system or combination of systems and portable containers to capture purged liquids. Containers for purged liquids must be covered or closed when not being filled or emptied.

Closed vent system means a system that is not open to the atmosphere and is composed of piping, ductwork, connections and, if necessary, flow inducing devices that transport gas or vapor from an emission point to a control device.

Combustion device means an individual unit of equipment, such as an incinerator, process heater or boiler, used for the combustion of organic emissions.

Connector means flanged, screwed or other joined fittings used to connect pipelines, a pipeline and a process vessel, or a pipeline and a piece of equipment, or that close an opening in a pipe that could be connected to another pipe. A common *connector* is a flange. Joined fittings welded completely around the circumference of the interface are not considered *connectors*.

Container means a portable unit in which a regulated material is stored, transported, treated or otherwise handled. Examples of containers include, but are not limited to, drums, dumpsters, roll-off boxes and portable cargo containers known as ''portable tanks'' or ''totes.'' Transport vehicles and barges are not containers.

Continuous emission monitoring system (CEMS) means the total equipment that may be required to meet the data acquisition and availability requirements of this subpart, used to sample, condition (if applicable), analyze and provide a record of emissions.

Continuous operation means any operation that is not a batch operation.

Continuous parameter monitoring system (CPMS) means the total equipment that may be required to meet the data acquisition and availability requirements of the Uniform Standards, used to sample, condition (if

applicable), analyze and provide a record of process or control system parameters.

Continuous record means documentation, either in hard copy or computer readable form, of data values measured at least once every 15 minutes and recorded at the frequency specified in § 65.860(a).

Control device means, with the exceptions noted below, a combustion device, recovery device, recapture device or any combination of these devices used to comply with this subpart or a referencing subpart. Process condensers or fuel gas systems are not considered to be control devices.

Control system means the combination of the closed vent system and the control devices used to collect and control vapors or gases from a regulated source.

Corrective action analysis and/or Corrective action plan means a description of all reasonable interim and long-term measures, if any, that are available, and an explanation of why the selected corrective action is the best alternative, including, but not limited to, any consideration of cost effectiveness.

Day means a calendar day.

Deck cover means a device that covers an opening in a floating roof deck. Some deck covers move horizontally relative to the deck (*i.e.,* a sliding cover).

Double block and bleed system means two block valves connected in series with a bleed valve or line that can vent the line between the two block valves.

Ductwork means a conveyance system such as those commonly used for heating and ventilation systems. It is often made of sheet metal and often has sections connected by screws or crimping. Hard-piping is not ductwork.

Empty or *emptying* means the partial or complete removal of stored liquid from a storage vessel. Storage vessels that contain liquid only as wall or bottom clingage, or in pools due to bottom irregularities, are considered completely empty.

Equipment means each pump, compressor, agitator, pressure relief device (PRD), sampling connection system, open-ended valve or line, valve, connector and instrumentation system that contains or contacts regulated material; and any control devices or systems used to comply with subpart J of this part. Equipment does not include process equipment, monitoring equipment, vapor collection equipment or testing equipment.

External floating roof or *EFR* means a floating roof located in a storage vessel without a fixed roof.

Fill or *filling* means the introduction of liquid into a storage vessel or container, but not necessarily to capacity.

First attempt at repair means to take action for the purpose of stopping or reducing leakage of regulated material to the atmosphere. A *first attempt at repair* includes monitoring, as specified in § 65.431(a) and (b) to verify that the leak is repaired, unless you determine by other means that the leak is not repaired.

Fittings means any cover or other device to close an opening through a fixed roof or through the deck of a floating roof for automatic bleeder vents (vacuum breaker vents), rim space vents, leg sleeves, deck drains, access hatches, gauge float wells, sample wells, columns, guidepoles, ladders, conservation vents, PRD or any other opening on the fixed roof or floating roof deck.

Fixed roof storage vessel means a vessel with roof that is mounted (*i.e.,* permanently affixed) on a storage vessel and that does not move with fluctuations in stored liquid level. All horizontal tanks are classified as fixed roof storage vessels.

Flexible enclosure device means a seal made of an elastomeric fabric (or other material) which completely encloses a slotted guidepole or ladder and eliminates the vapor emission pathway from inside the storage vessel through the guidepole slots or ladder slots to the outside air.

Flexible fabric sleeve seal means a seal made of an elastomeric fabric (or other material) which covers an opening in a floating roof deck, and which allows the penetration of a fixed roof support column. The seal is attached to the rim of the deck opening and extends to the outer surface of the column. The seal is draped (but does not contact the stored liquid) to allow the horizontal movement of the deck relative to the column.

Floating roof means a roof that floats on the surface of the liquid in a storage vessel. A floating roof substantially covers the stored liquid surface (but is not necessarily in contact with the entire surface), and is comprised of a deck, a rim seal and miscellaneous deck fittings.

Flow indicator means a device that indicates whether gas flow is or whether the valve position would allow gas flow to be present in a line.

Fuel gas means gases that are combusted to derive useful work or heat.

Fuel gas system means the offsite and onsite piping and flow and pressure control system that gathers gaseous streams generated by onsite operations, may blend them with other sources of gas and transports the gaseous streams for use as fuel gas in combustion devices or in-process combustion equipment, such as furnaces and gas turbines, either singly or in combination. Piping that routes emissions to boilers or process heaters as the primary fuel or introduced with the primary fuel are considered fuel gas systems.

Halogenated vent stream or *halogenated stream* means a stream determined to have a mass rate of halogen atoms of 0.45 kilograms per hour or greater, determined by the procedures presented in § 65.702(c).

Hard-piping means pipe or tubing that is manufactured and properly installed using good engineering judgment and standards, such as ASME B31.3–2010, Process Piping (incorporated by reference, see § 65.265).

In gas and vapor service means that a piece of equipment in regulated material service contains a gas or vapor at operating conditions.

In heavy liquid service means that a piece of equipment in regulated material service is not in gas and vapor service or in light liquid service.

In light liquid service means that a piece of equipment in regulated material service contains a liquid that meets the following conditions: (1) The vapor pressure of one or more of the organic compounds is greater than 0.3 kilopascals at 20 degrees Celsius; (2) The total concentration of the pure organic compounds constituents having a vapor pressure greater than 0.3 kilopascals at 20 degrees Celsius is equal to or greater than 20 percent by weight of the total process stream; (3) The fluid is a liquid at operating conditions. (Note to definition of ''in light liquid service'': Vapor pressures may be determined by standard reference texts or ASTM D–2879(2011), Standard Test Method for Hydrocarbon Types in Low Olefinic Gasoline by Mass Spectrometry (incorporated by reference, see § 65.265).

In liquid service means that a piece of equipment in regulated material service is not in gas and vapor service.

In regulated material service means, unless specified otherwise in the referencing subpart, a regulated source or portion of a regulated source (*e.g.,* a piece of equipment) that either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of regulated material (as defined in the referencing subpart), as determined according to the provisions of § 65.270. The provisions of § 65.270 also specify how to determine that a regulated source or portion of a

regulated source is not *in regulated material service.*

In vacuum service means that equipment, a closed vent system, fuel gas system or storage vessel is operating at an internal pressure that is at least 0.7 pounds per square inch gauge (psig) below ambient pressure.

Initial fill means the first introduction of liquid into a storage vessel that is either newly constructed or has not contained any regulated material for a year or longer.

Initial startup means, for new sources, the first time the source begins production. For additions or changes not defined as a new source by the referencing subpart, *initial startup* means the first time additional or changed equipment is put into operation. *Initial startup* does not include operation solely for testing of equipment. Initial startup does not include subsequent startup of process units following malfunction or process unit shutdowns. Except for equipment leaks, *initial startup* also does not include subsequent startups (of process units following changes in product for flexible operation units or following recharging of equipment in batch operations).

In-situ sampling systems means non-extractive samplers or in-line samplers.

Instrumentation system means a group of equipment used to condition and convey a sample of the process fluid to analyzers and instruments for the purpose of determining process operating conditions (*e.g.,* composition, pressure, flow, etc.). Valves and connectors are the predominant type of equipment used in *instrumentation systems;* however, other types of equipment may also be included in these systems. Only valves nominally 0.5 inches and smaller, and connectors nominally 0.75 inches and smaller in diameter are considered instrumentation systems. Valves greater than nominally 0.5 inches and connectors greater than nominally 0.75 inches associated with *instrumentation systems* are not considered part of *instrumentation systems* and must be monitored individually.

Intermediate change to monitoring means a modification to federally required monitoring involving ''proven technology'' (generally accepted by the scientific community as equivalent or better) that is applied on a site-specific basis and that may have the potential to decrease the stringency of the associated emission limitation or standard. Though site-specific, an intermediate change may set a national precedent for a source category and may ultimately result in a revision to the federally required monitoring. Examples of intermediate changes to monitoring include, but are not limited to:

(1) Use of a CEMS in lieu of a parameter monitoring approach;

(2) Decreased frequency for non-continuous parameter monitoring or physical inspections;

(3) Changes to quality control requirements for parameter monitoring; and

(4) Use of an electronic data reduction system in lieu of manual data reduction.

Intermediate change to test method means a within-method modification to a federally enforceable test method involving ''proven technology'' (generally accepted by the scientific community as equivalent or better) that is applied on a site-specific basis and that may have the potential to decrease the stringency of the associated emission limitation or standard. Though site-specific, an intermediate change may set a national precedent for a source category and may ultimately result in a revision to the federally enforceable test method. In order to be approved, an intermediate change must be validated according to EPA Method 301 (40 CFR part 63, appendix A) to demonstrate that it provides equal or improved accuracy and precision. Examples of intermediate changes to a test method include, but are not limited to:

(1) Modifications to a test method's sampling procedure, including substitution of sampling equipment that has been demonstrated for a particular sample matrix and use of a different impinger absorbing solution;

(2) Changes in sample recovery procedures and analytical techniques, such as changes to sample holding times and use of a different analytical finish with proven capability for the analyte of interest; and

(3) ''Combining'' a federally required method with another proven method for application to processes emitting multiple pollutants.

Internal floating roof or *IFR* means a floating roof located in a storage vessel with a fixed roof. An EFR located in a storage vessel to which a fixed roof has been added is considered to be an *internal floating roof.*

Internal guidepole sleeve means a cylindrical device that fits on the inside of a slotted guidepole and blocks the vapor emission pathway from the interior of the guidepole through the guidepole slots to the outside air.

Liquid-mounted seal means a resilient or liquid-filled rim seal designed to contact the stored liquid.

Liquids dripping means any visible leakage from the seal including dripping, spraying, misting, clouding and ice formation. Indications of *liquids dripping* include puddling or new stains that are indicative of an existing evaporated drip.

Major change to monitoring means a modification to federally required monitoring that uses ''unproven technology or procedures'' (not generally accepted by the scientific community) or is an entirely new method (sometimes necessary when the required monitoring is unsuitable). A major change to monitoring may be site-specific or may apply to one or more source categories and will almost always set a national precedent. Examples of major changes to monitoring include, but are not limited to:

(1) Use of a new monitoring approach developed to apply to a control technology not contemplated in the applicable regulation;

(2) Use of a predictive emission monitoring system (PEMS) in place of a required CEMS;

(3) Use of alternative calibration procedures that do not involve calibration gases or test cells;

(4) Use of an analytical technology that differs from that specified by a performance specification;

(5) Decreased monitoring frequency for a CEMS, continuous opacity monitoring system, PEMS or CPMS;

(6) Decreased monitoring frequency for a leak detection and repair program; and

(7) Use of alternative averaging times for reporting purposes.

Major change to test method means a modification to a federally enforceable test method that uses ''unproven technology or procedures'' (not generally accepted by the scientific community) or is an entirely new method (sometimes necessary when the required test method is unsuitable). A major change to a test method may be site-specific or may apply to one or more sources or source categories, and will almost always set a national precedent. In order to be approved, a major change must be validated according to EPA Method 301 (40 CFR part 63, appendix A). Examples of major changes to a test method include, but are not limited to:

(1) Use of an unproven analytical finish;

(2) Use of a method developed to fill a test method gap;

(3) Use of a new test method developed to apply to a control technology not contemplated in the applicable regulation; and

(4) Combining two or more sampling/analytical methods (at least one

unproven) into one for application to processes emitting multiple pollutants.

Maximum representative operating conditions means process operating conditions that result in the most challenging condition for the control device. The most challenging condition for the control device may include, but is not limited to, the highest hazardous air pollutant (HAP) mass loading rate to the control device or the highest HAP mass loading rate of constituents that approach the limits of solubility for scrubbing media.

Maximum true vapor pressure or *MTVP* means the equilibrium partial pressure exerted by the total regulated material in the stored or transferred liquid at the temperature equal to the highest calendar-month average of the liquid storage or transfer temperature for liquids stored or transferred above or below the ambient temperature or at the local maximum monthly average temperature, as reported by the National Weather Service, for liquids stored or transferred at the ambient temperature, as determined using methods specified in § 65.306.

Mechanical shoe seal or *metallic shoe seal* means a rim seal consisting of a band of metal (or other suitable material) as the sliding contact with the wall of the storage vessel, and a fabric seal to close the annular space between the band and the rim of the floating roof deck. The band is typically formed as a series of sheets (shoes) that are overlapped or joined together to form a ring. The sheets are held vertically against the wall of the storage vessel by springs, weighted levers or other mechanisms and are connected to the floating roof by braces or other means. The lower end of the band extends into the stored liquid.

Minor change to monitoring means:

(1) A modification to federally required monitoring that:

(i) Does not decrease the stringency of the compliance and enforcement measures for the relevant standard;

(ii) Has no national significance (*e.g.,* does not affect implementation of the applicable regulation for other regulated sources, does not set a national precedent and individually does not result in a revision to the monitoring requirements); and

(iii) Is site-specific, made to reflect or accommodate the operational characteristics, physical constraints or safety concerns of a regulated source.

(2) Examples of minor changes to monitoring include, but are not limited to:

(i) Modifications to a sampling procedure, such as use of an improved sample conditioning system to reduce maintenance requirements;

(ii) Increased monitoring frequency; and

(iii) Modification of the environmental shelter to moderate temperature fluctuation and, thus, protect the analytical instrumentation.

Minor change to test method means:

(1) A modification to a federally enforceable test method that:

(i) Does not decrease the stringency of the emission limitation or standard;

(ii) Has no national significance (*e.g.,* does not affect implementation of the applicable regulation for other regulated sources, does not set a national precedent and individually does not result in a revision to the test method); and

(iii) Is site-specific, made to reflect or accommodate the operational characteristics, physical constraints or safety concerns of a regulated source.

(2) Examples of minor changes to a test method include, but are not limited to:

(i) Field adjustments in a test method's sampling procedure, such as a modified sampling traverse, or location to avoid interference from an obstruction in the stack, increasing the sampling time or volume, use of additional impingers for a high moisture situation, accepting particulate emission results for a test run that was conducted with a lower-than-specified temperature, substitution of a material in the sampling train that has been demonstrated to be more inert for the sample matrix; and

(ii) Changes in recovery and analytical techniques, such as a change in quality control/quality assurance requirements needed to adjust for analysis of a certain sample matrix.

Monitoring means the collection and use of measurement data or other information to control the operation of a process or pollution control device or to verify a work practice standard relative to assuring compliance with applicable requirements. Monitoring is composed of four elements:

(1) Indicator(s) of performance—the parameter or parameters you measure or observe for demonstrating proper operation of the pollution control measures or compliance with the applicable emissions limitation or standard. Indicators of performance may include direct or predicted emissions measurements (including opacity), operational parametric values that correspond to process or control device (and capture system) efficiencies or emissions rates and recorded findings of inspection of work practice activities, materials tracking or design characteristics. Indicators may be expressed as a single maximum or minimum value, a function of process variables (for example, within a range of pressure drops), a particular operational or work practice status (for example, a damper position, completion of a waste recovery task, materials tracking) or an interdependency between two or among more than two variables.

(2) Measurement techniques—the means by which you gather and record information of or about the indicators of performance. The components of the measurement technique include the detector type, location and installation specifications, inspection procedures, and quality assurance and quality control measures. Examples of measurement techniques include CEMS, continuous opacity monitoring systems, CPMS, and manual inspections that include making records of process conditions or work practices.

(3) Monitoring frequency—the number of times you obtain and record monitoring data over a specified time interval. Examples of monitoring frequencies include at least four points equally paced for each hour for continuous emissions or parametric monitoring systems, at least every 10 seconds for continuous opacity monitoring systems and at least once per operating day (or week, month, etc.) for work practice or design inspections.

(4) Averaging time—the period over which you average and use data to verify proper operation of the pollution control approach or compliance with the emissions limitation or standard. Examples of averaging time include a 3-hour average in units of the emissions limitation, a 30-day rolling average emissions value, a daily average of a control device operational parametric range and an instantaneous alarm.

Non-repairable means that it is technically infeasible to repair a piece of equipment from which a leak has been detected without a process unit shutdown.

Nonstandard batch means a batch process that is operated outside of the range of operating conditions that are documented in an existing operating scenario, but is still a reasonably anticipated event. For example, a nonstandard batch occurs when additional processing or processing at different operating conditions must be conducted to produce a product that is normally produced under the conditions described by the standard batch. A nonstandard batch may be necessary, as a result of a malfunction, but it is not itself a malfunction.

Open-ended valve or line means any valve, except relief valves, having one

side of the valve seat in contact with process fluid and one side open to atmosphere, either directly or through any length of open piping. An *open-ended valve or line* with a cap, blind flange, plug or second valve on the side that would be otherwise open to the atmosphere is still considered an *open-ended valve or line.*

Operating block means a period of time that is equal to the time from the beginning to end of batch process operations within a process.

Optical gas imaging instrument means an instrument capable of producing an image that makes visible emissions that otherwise may be invisible to the naked eye.

Owner or operator means any person who owns, leases, operates, controls or supervises a regulated source or a stationary source of which a regulated source is a part.

Performance test means the collection of data resulting from the execution of a test method (usually three emission test runs) used to demonstrate compliance with a relevant emission limit, as specified in the performance test section of 40 CFR part 65, subpart M or in the referencing subpart.

Pole float means a float located inside a guidepole that floats on the surface of the stored liquid. The rim of the float has a wiper or seal that extends to the inner surface of the pole.

Pole sleeve means a device that extends from either the cover or the rim of an opening in a floating roof deck to the outer surface of a pole that passes through the opening. The sleeve extends into the stored liquid.

Pole wiper means a seal that extends from either the cover or the rim of an opening in a floating roof deck to the outer surface of a pole that passes through the opening.

Polymerizing monomer means a compound that may form polymer buildup in pump mechanical seals resulting in rapid mechanical seal failure.

Pressure release means the emission of materials resulting from the system pressure being greater than the set pressure of the PRD. This release may be one release or a series of releases over a short time period.

Pressure relief device (PRD) means a safety device used to prevent operating pressures from exceeding the maximum allowable working pressure of the process component. Examples of *pressure relief devices* are a spring-loaded pressure relief valve and a rupture disk. Except for devices used to comply with the vapor balancing requirements in § 65.320(c), devices that are actuated either by a pressure of less than or equal to 2.5 psig or by a vacuum are not *pressure relief devices.*

Pressure vessel means a storage vessel that is used to store liquids or gases and is designed not to vent to the atmosphere as a result of compression of the vapor headspace in the pressure vessel during filling of the pressure vessel to its design capacity.

Primary fuel means the fuel that provides the principal heat input to a combustion device. To be considered primary, the fuel must be able to sustain operation without the addition of other fuels.

Process condenser means a condenser whose primary purpose is to recover material as an integral part of a regulated batch process. All condensers recovering condensate from a regulated batch process at or above the boiling point or all condensers in line prior to a vacuum source, are considered process condensers. Typically, a primary condenser or condensers in series, are considered to be integral to the batch regulated process if they are capable of and normally used for the purpose of recovering chemicals for fuel value (*i.e.,* net positive heating value), use, reuse or for sale for fuel value, use or reuse. This definition does not apply to a condenser that is used to remove materials that would hinder performance of a downstream recovery device as follows:

(1) To remove water vapor that would cause icing in a downstream condenser.

(2) To remove water vapor that would negatively affect the adsorption capacity of carbon in a downstream carbon adsorber.

(3) To remove high molecular weight organic compounds or other organic compounds that would be difficult to remove during regeneration of a downstream carbon adsorber.

Process heater means an enclosed combustion device that transfers heat liberated by burning fuel directly to process streams or to heat transfer liquids other than water. A process heater may, as a secondary function, heat water in unfired heat recovery sections.

Process tank means a tank or other vessel that is used within a process to collect material discharged from a feedstock storage vessel or component within the process before the material is transferred to other components within the process or a product storage vessel. Examples of process tanks include surge control vessels, bottoms receivers and weigh tanks. In addition, all vessels in which a unit operation is conducted, including, but not limited to reaction, mixing and separation are process tanks.

Process unit means, unless specified otherwise in the applicable referencing subpart, the components assembled to produce an intended intermediate or final product. A *process unit* can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product. All components located within the fence line of the plant site are included in the *process unit.* Components located offsite are not included within any *process unit.*

Process unit shutdown means a work practice or operational procedure that stops production from a process unit, or part of a process unit during which it is technically feasible to clear process material from a process unit, or part of a process unit, consistent with safety constraints and during which, repairs can be affected. The following are not considered process unit shutdowns:

(1) An unscheduled work practice or operations procedure that stops production from a process unit, or part of a process unit, for less than 24 hours.

(2) An unscheduled work practice or operations procedure that would stop production from a process unit, or part of a process unit, for a shorter period of time than would be required to clear the process unit, or part of the process unit of materials and start up the unit, and would result in greater emissions than delay of repair of leaking components, until the next scheduled process unit shutdown.

(3) The use of spare equipment and technically feasible bypassing of equipment without stopping production.

Referencing subpart means the subpart that directs you to comply with one or more applicable Uniform Standards (subparts I through M of this part). A *referencing subpart* for one Uniform Standard may also be a *referencing subpart* for another Uniform Standard.

Regulated material means chemicals or groups of chemicals (such as volatile organic compounds or HAP) that are regulated by the referencing subpart.

Regulated source means the stationary source, the group of stationary sources or the portion of a stationary source that is regulated by a relevant standard or other requirement established, pursuant to a referencing subpart.

Repair means that:

(1) If indications of a potential leak or liquids dripping are observed during sensory monitoring or a visual inspection, then the equipment, seal, fitting or other emissions source is adjusted, or otherwise altered, to eliminate the indications of a potential leak or liquids dripping.

(2) If a leak is detected by instrument monitoring, then the equipment, seal, fitting or other emissions source is adjusted or otherwise altered to eliminate a leak, as defined in the applicable sections of subparts I through M of this part and the emissions source is monitored, as specified in § 65.431(a) and (b) to verify that emissions are below the applicable instrument reading that defines a leak.

(3) If a leak is detected by a sensor or by failure of one or more design or inspection criteria, then the equipment, seal, fitting or other emissions source is adjusted, or otherwise altered, to return the emissions source to conditions such that the sensor no longer indicates a leak or that the emissions source is meeting the design or inspection criteria, as applicable.

(4) If a leak is detected by optical gas imaging, then the equipment, seal, fitting or other emissions source is adjusted, or otherwise altered, to eliminate the leak and the emissions source is monitored, as specified in § 65.450(b)(2) to verify that the leak can no longer be imaged by the optical gas imaging instrument.

(5) Repair does not mean repairs to CEMS or CPMS.

Rim seal means a device attached to the rim of a floating roof deck that spans the annular space between the deck and the wall of the storage vessel. When a floating roof has only one such device, it is a primary seal; when there are two seals (one mounted above the other), the lower seal is the primary seal and the upper seal is the secondary seal.

Run means one of a series of emission or other measurements needed to determine emissions for a representative operating period or cycle, as specified in 40 CFR part 65, subpart M or in the referencing subpart. Unless otherwise specified, a run may be either intermittent or continuous within the limits of good engineering practice.

Run down tank means a tank in which the product from a still, agitator or other processing equipment is received, and from which, the product is pumped to a storage vessel.

Rupture disk means a PRD that consists of a diaphragm held between flanges. The diaphragm splits when the pressure on the process side exceeds the design set pressure.

Sampling connection system means an assembly of piping and equipment within a process unit used during periods of representative operation to take samples of the process fluid. Lines that convey samples to analyzers and analyzer bypass lines are part of sampling connection systems. A device or apparatus used to take non-routine grab samples is not considered a *sampling connection system.*

Secondary fuel means a fuel fired through a burner other than the primary fuel burner that provides supplementary heat, in addition to the heat provided by the primary fuel.

Sensor means a device that measures a physical quantity or the change in a physical quantity, such as temperature, pressure, flow rate, pH or liquid level.

Sensory monitoring means visual, audible, olfactory or any other detection method used to determine a potential leak to the atmosphere.

Set pressure means the pressure at which a properly operating PRD begins to open to relieve atypical process system operating pressure.

Slotted guidepole means a guidepole or gaugepole that has slots or holes through the wall of the pole. The slots or holes allow the stored liquid to flow into the pole at liquid levels above the lowest operating level.

Small boiler or process heater means a boiler or process heater that has a design capacity less than 44 megawatts, and in which the vent stream is introduced with the combustion air or as a secondary fuel.

Startup means the setting into operation of a process unit, a piece of equipment or a control device that is subject to the Uniform Standards.

Storage capacity means the internal volume of a storage vessel from the floor to the top of the shell. For example, for a flat-bottomed storage vessel, the storage capacity is determined by multiplying the internal cross-sectional area of the storage vessel by the height of the shell. The calculation must be modified, as necessary, to account for floors that are not flat (*e.g.,* slope-bottomed, cone-up or cone-down).

Storage vessel means a stationary unit that is constructed of non-earthen materials (such as wood, concrete, steel, fiberglass or plastic), which provides structural support and is designed to hold an accumulation of liquids or other materials. The following are not considered storage vessels:

(1) Vessels permanently attached to motor vehicle, such as trucks, railcars, barges or ships;

(2) Vessels storing liquid that contains regulated material only as an impurity;

(3) Wastewater tanks; and

(4) Process tanks.

Submerged loading means the filling of a transport vehicle through a submerged fill pipe whose discharge is no more than 6 inches from the bottom of the tank. Bottom loading of transport vehicles is included in this definition.

Supplemental combustion air means the air that is added to a vent stream after the vent stream leaves the unit operation. Air that is part of the vent stream as a result of the nature of the unit operation is not considered supplemental combustion air. Air required to operate combustion device burner(s) is not considered supplemental combustion air. Air required to ensure the proper operation of catalytic oxidizers, to include the intermittent addition of air upstream of the catalyst bed to maintain a minimum threshold flow rate through the catalyst bed or to avoid excessive temperatures in the catalyst bed, is not considered to be supplemental combustion air.

Surge control vessel means feed drums, recycle drums and intermediate vessels as part of any continuous operation. *Surge control vessels* are used within a process unit when in-process storage, mixing or management of flow rates or volumes is needed to introduce material into continuous operations.

Tank car means an unpowered type of rolling stock (or vehicle) with a permanently attached vessel that is designed to carry liquid freight by rail.

Thermal oxidizer means a combustion device with an enclosed combustion chamber (*i.e.,* an enclosed fire box) that is used for destroying organic compounds. Auxiliary fuel may be used to heat waste gas to combustion temperatures.

Transfer operations means the loading into a transport vehicle or container of organic liquids from a transfer rack.

Transfer rack means a single system used to load organic liquids into transport vehicles or containers. It includes all loading and unloading arms, pumps, meters, shutoff valves, relief valves and other piping and equipment necessary for the transfer operation. Transfer equipment and operations that are physically separate (*i.e.,* do not share common piping, valves and other equipment) are considered to be separate transfer racks.

Transport vehicle means a cargo tank or tank car.

Uniform Standard(s) mean(s) any one or all of subparts I, J, K, L and M of this part.

Unslotted guidepole or *solid guidepole* means a guidepole or gaugepole that does not have slots or holes through the wall of the pole at or above the level of the floating roof when it is at its lowest operating level.

Vapor-mounted seal means a rim seal designed not to be in contact with the stored liquid. Vapor-mounted seals may include, but are not limited to, resilient seals and flexible wiper seals.

Wastewater stream means the wastewater generated by a particular process unit, tank or treatment process.

Wastewater tank means a stationary structure that is designed to contain an accumulation of wastewater or any liquid or solid material containing volatile organics that is removed from a wastewater stream and is constructed of non-earthen materials (*e.g.,* wood, concrete, steel, plastic) that provides structural support.

You means an owner or operator of a regulated source under the Uniform Standards.

TABLE 1 TO SUBPART H OF PART 65—APPLICABLE 40 CFR PARTS 60, 61 AND 63 GENERAL PROVISIONS

Part of 40 CFR	General provisions from 40 CFR parts 60, 61 and 63 that continue to apply to owners and operators of regulated sources subject to the uniform standards of this part
A. 40 CFR part 60, subpart A provisions for referencing subparts from part 60	§ 60.1
	§§ 60.2, 60.3, 60.4 [1]
	§ 60.5
	§ 60.6
	§ 60.7(a)(1) and (a)(3)
	§ 60.8(a)
	§§ 60.9, 60.10, 60.12
	§ 60.14
	§ 60.15
	§ 60.16
	§ 60.17
B. 40 CFR part 61, subpart A provisions for referencing subparts from part 61	§§ 61.01 through 61.03, 61.04,[1] 61.05 through 61.09
	§ 61.10(b)
	§ 61.11
	§ 61.13(a)
	§§ 61.15 through 61.19
C. 40 CFR part 63, subpart A provisions for referencing subparts from part 63	§ 63.1 [2]
	§§ 63.2, 63.3, 63.4
	§ 63.5
	§ 63.6(a) through (d), (i) and (j)
	§ 63.7(a) [3]
	§ 63.9(b), (c), (d), (h)(5)
	§ 63.10(b)(2)(xiv), (d)(4)
	§ 63.11(a), (c), (d), (e)
	§§ 63.12, 63.13, 63.15

[1] Except that the requirements associated with where to submit reports does not apply; electronic submittal is required, as specified in § 65.225.

[2] Except for § 63.1(a)(10) through (12).

[3] Except that a waiver of performance testing is specified in § 65.245, and the conditions of § 63.7(c)(3)(ii)(B) do not apply to this paragraph.

3. Add subpart I to read as follows:

Subpart I—National Uniform Emission Standards for Storage Vessels and Transfer Operations

Sec.

What This Subpart Covers

65.300 What is the purpose of this subpart?
65.301 Am I subject to this subpart?
65.302 What parts of my plant does this subpart cover?
65.303 What parts of the General Provisions apply to me?

General Requirements

65.305 What requirements in this subpart apply to me?
65.306 How must I determine the MTVP of stored material?

Standards and Compliance Requirements for Storage Vessels

65.310 What requirements must I meet for an atmospheric storage vessel equipped with a fixed roof?
65.315 What requirements must I meet for an atmospheric storage vessel with a floating roof?
65.320 What requirements must I meet for a fixed roof atmospheric storage vessel if I use vapor balance?
65.325 What requirements must I meet for a fixed roof atmospheric storage vessel if I route emissions through a closed vent system to a control device?
65.330 What requirements must I meet for a fixed roof atmospheric storage vessel if I route emissions to a fuel gas system?
65.340 What requirements must I meet for a pressure vessel?

Standards and Compliance Requirements for Transfer Operations

65.360 What requirements must I meet for control of transport vehicles and transfer operations to load transport vehicles?
65.370 What requirements must I meet for control of transfer operations to load containers?

Recordkeeping and Reporting

65.380 What records must I keep?
65.382 What information must I submit in my Notification of Compliance Status?
65.384 What information must I submit in my semiannual periodic report?
65.386 What information must I submit in my annual periodic report?
65.388 What other reports must I submit and when?

Other Requirements and Information

65.390 What definitions apply to this subpart?

List of Tables in Subpart I of Part 65

Table 1 to Subpart I of Part 65—Standards and Compliance Requirements for Storage Vessels and Transfer Operations
Table 2 to Subpart I of Part 65—Inspection and Monitoring Requirements and Schedule for Storage Vessels Equipped With an IFR
Table 3 to Subpart I of Part 65—Inspection and Monitoring Requirements and Schedule for Storage Vessels Equipped With an EFR

What This Subpart Covers

§ 65.300 What is the purpose of this subpart?

This subpart specifies requirements to meet the emission standards of a referencing subpart for storage vessels and transfer operations.

§ 65.301 Am I subject to this subpart?

You are subject to this subpart if you are an owner or operator who is subject to a referencing subpart and you have been expressly directed to comply with the Uniform Standards of this subpart by a referencing subpart.

§ 65.302 What parts of my plant does this subpart cover?

This subpart applies to storage vessels and transfer operations that contain or contact regulated material and are subject to a referencing subpart.

§ 65.303 What parts of the General Provisions apply to me?

The General Provisions of 40 CFR parts 60, 61 and 63 apply to this subpart, as specified in subpart H of this part.

General Requirements

§ 65.305 What requirements in this subpart apply to me?

The provisions of this subpart apply to storage vessels and transfer operations that contain or contact regulated material, as specified in paragraphs (a) through (e) of this section.

(a) For each atmospheric storage vessel that meets the requirements in item 1 of Table 1 to this subpart, you must comply with § 65.310. Alternatively, you may elect to comply with either paragraph (a)(1) or (a)(2) of this section.

(1) Comply with § 65.310 if you install an internal floating roof, vapor balance or connect the storage vessel to a closed vent system and control device, but you are not required to comply with § 65.315, § 65.320 or § 65.325.

(2) Comply with any of the options in paragraphs (b)(1) through (4) of this section.

(b) For each atmospheric storage vessel that meets the size and maximum true vapor pressure (MTVP) thresholds in item 2 or item 3 of Table 1 to this subpart, you must comply with either paragraph (b)(1), (2), (3) or (4) of this section.

(1) Use an external floating roof or a fixed roof with an internal floating roof, in accordance with § 65.315. This option may be used only if the MTVP of the stored liquid is less than 76.6 kilopascals (kPa).

(2) Vapor balance in accordance with § 65.320.

(3) Maintain a fixed roof and route emissions through a closed vent system to a control device, in accordance with § 65.325.

(4) Route emissions to a fuel gas system in accordance with § 65.330. This option may not be used when the displaced vapors from the storage vessel include halogenated compounds.

(c) For each pressure vessel, you must comply with § 65.340.

(d) For transfer operations that involve loading of transport vehicles, you must comply with § 65.360.

(e) For transfer operations that involve loading of containers, you must comply with § 65.370.

§ 65.306 How must I determine the MTVP of stored material?

(a) Determine the MTVP at the times specified in paragraphs (b) through (d) of this section and keep records, as specified in paragraph (e) of this section. For a single-component stock, use any one of the methods specified in paragraphs (a)(1), (2), (3) or (5) of this section. For a mixture of compounds (such as petroleum liquids), use any one of the methods specified in paragraphs (a)(2) through (5) of this section.

(1) As obtained from standard reference texts.

(2) In accordance with methods described in chapter 19.2 of the API Manual of Petroleum Measurement Standards, ''Evaporative Loss from Floating Roof Tanks'' (incorporated by reference, see § 65.265). If you need the total vapor pressure of a petroleum liquid mixture (e.g., crude oil or gasoline), you must test for Reid vapor pressure and distillation slope, as applicable, to determine the constants A and B for the vapor pressure equation. If only part of a mixture is regulated material, you must test to determine the composition of the stored liquid. Testing is not required if you determine, based on engineering judgment, that the mixture contains less than 1-percent regulated material by weight.

(3) As determined by the ''American Society for Testing and Materials Method D2879–83'' (incorporated by reference, see § 65.265).

(4) As determined using ''Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatography'' (incorporated by reference, see § 65.265).

(5) Any other method approved by the Administrator in accordance with § 65.250.

(b) Determine the MTVP for each storage vessel that contains a regulated material either prior to the required submittal date of your Notification of Compliance Status or prior to the initial fill with regulated material, whichever is later.

(c) Determine the MTVP each time the storage vessel is filled with a different type of material.

(d) Determine the MTVP at least annually if the storage vessel stores a mixture and it was determined to be subject to § 65.305(a) the last time the MTVP was determined.

(e) Keep records of each MTVP determination, as specified in § 65.380(b)(2).

Standards and Compliance Requirements for Storage Vessels

§ 65.310 What requirements must I meet for an atmospheric storage vessel equipped with a fixed roof?

You must equip the storage vessel with a fixed roof and operate in accordance with paragraphs (a) through (d) of this section.

(a) *Closure requirements.* Each opening in the fixed roof must be equipped with a cover or other type of closure device.

(b) *Operating requirements.* (1) Except as specified in paragraph (b)(2) of this section, the fixed roof must be installed with each closure device secured in the closed position when the storage vessel contains regulated material.

(2) You may open closure devices or remove the fixed roof under the conditions specified in paragraphs (b)(2)(i) and (ii) of this section.

(i) A closure device may be opened or the roof may be removed when needed to provide access for manual operations such as maintenance, inspection, sampling and cleaning.

(ii) Opening of a spring-loaded conservation vent or similar type of device that vents to the atmosphere (or allows air to enter the storage vessel) is allowed to maintain the tank internal operating pressure within tank design specifications when loading operations or diurnal ambient temperature fluctuations cause the pressure inside the storage vessel to migrate beyond the operating pressure range for the storage vessel.

(c) *Monitoring requirements.* (1) Except as specified in paragraph (c)(2)

or (3) of this section, monitor each potential source of vapor leakage from the fixed roof and its closure devices for leaks in accordance with either paragraph (c)(1)(i) or (ii) of this section. Conduct monitoring while the storage vessel contains regulated material.

(i) Monitor using Method 21 of 40 CFR part 60, appendix A–7, in accordance with § 65.431(a) and (b). A leak is detected if you obtain an instrument reading greater than 500 parts per million by volume. Conduct monitoring within 90 days after the initial fill and at least annually.

(ii) Monitor in accordance with the protocol for optical gas imaging, as specified in 40 CFR part 60, appendix K. You may use this monitoring option only if at least one compound in the emissions can be detected by the optical gas imaging instrument. A leak is detected if you observe an image of emissions when using the optical gas imaging instrument. Conduct monitoring within 90 days after the initial fill and at least semiannually.

(2) If you determine parts of the roof are unsafe to monitor using Method 21 of part 60, appendix A–7, because operating personnel would be exposed to an imminent or potential danger as a consequence of complying with such monitoring, then the inspection requirements specified in paragraph (c)(1)(i) of this section do not apply and you must comply with the requirements specified in paragraphs (c)(2)(i) through (iii) of this section.

(i) You must prepare and maintain at the plant site written documentation that identifies all parts of the fixed roof and any closure devices that are unsafe to monitor and explains why such parts are unsafe to monitor.

(ii) You must develop and implement a written plan and schedule to conduct inspections during times when it is safe to do so. The required inspections must be performed as frequently as practicable, but do not need to be performed more than annually. Keep a copy of the written plan and schedule at the plant site, as specified in § 65.380(c)(4).

(iii) As an alternative to paragraphs (c)(2)(i) and (ii) of this section, you may monitor the parts of the roof identified in paragraph (c)(2)(i) of this section by using optical gas imaging, as specified in paragraph (c)(1)(ii) of this section, if the criteria in paragraph (c)(1)(ii) of this section and 40 CFR part 60, appendix K, are met.

(3) No monitoring is required during a calendar year when either of the conditions in paragraph (c)(3)(i) or (ii) of this section are met.

(i) The storage vessel stores no regulated material at any time during the calendar year.

(ii) The storage vessel is emptied less than 120 days since the last inspection and no regulated material is stored in the storage vessel for the remainder of the year.

(4) Keep records of the date of each inspection, as specified in § 65.380(c)(1), and keep records of each leak, as specified in § 65.380(c)(2). Provide notification of each inspection, as specified in § 65.388(a)(1).

(d) *Repair requirements.* When a leak is identified during monitoring required under paragraph (c) of this section, you must either complete repairs or completely empty the storage vessel within 45 days. If a repair cannot be completed or the vessel cannot be completely emptied within 45 days, you may use up to two extensions of up to 30 additional days each. Keep records documenting each decision to use an extension, as specified in § 65.380(c)(3). Not repairing or emptying the storage vessel within the time frame specified in this paragraph (d) is a deviation and must be reported in your semiannual periodic report, as specified in § 65.384(a).

§ 65.315 What requirements must I meet for an atmospheric storage vessel with a floating roof?

You must comply with the requirements in paragraphs (a) through (g) of this section.

(a) *Design requirements.* (1) *Fixed roof in combination with internal floating roof.* An internal floating roof (IFR) must be equipped with one of the seal configurations listed in paragraph (a)(1)(i), (ii) or (iii) of this section.

(i) A liquid-mounted seal.

(ii) A mechanical shoe seal.

(iii) Two seals mounted one above the other. The lower seal may be vapor-mounted.

(2) *External floating roof.* An external floating roof (EFR) must be equipped with one of the seal configurations listed in paragraph (a)(2)(i) or (ii) of this section.

(i) A liquid-mounted seal and a secondary seal.

(ii) A mechanical shoe seal and a secondary seal. The upper end of the shoe(s) must extend a minimum of 24 inches above the stored liquid surface.

(3) *Deck fittings.* Openings through the deck of the floating roof must be equipped, as described in paragraphs (a)(3)(i) through (x) of this section.

(i) Each opening, except those for automatic bleeder vents (vacuum breaker vents) and rim space vents, must have its lower edge below the surface of the stored liquid.

(ii) Each opening, except those for automatic bleeder vents (vacuum breaker vents), rim space vents, leg sleeves and deck drains, must be equipped with a deck cover. The deck cover must be equipped with a gasket between the cover and the deck.

(iii) Each automatic bleeder vent (vacuum breaker vent) and rim space vent must be equipped with a gasketed lid, pallet, flapper or other closure device.

(iv) Each opening for a fixed roof support column may be equipped with a flexible fabric sleeve seal instead of a deck cover.

(v) Each opening in an internal floating roof for a sample well may be equipped with a slit fabric seal or similar device that covers at least 90 percent of the opening instead of a deck cover.

(vi) Each opening for a deck drain that empties into the stored liquid must be equipped with a slit fabric seal or similar device that covers at least 90 percent of the opening.

(vii) Each cover on access hatches and gauge float wells must be designed to be bolted or fastened when closed.

(viii) Each opening for an unslotted guidepole must be equipped with a pole wiper, and each unslotted guidepole must be equipped with either a gasketed or welded cap on the top of the guidepole.

(ix) Each opening for a slotted guidepole must be equipped with one of the control device configurations specified in paragraph (a)(3)(ix)(A), (B), (C) or (D) of this section.

(A) A pole wiper and a pole float. The wiper or seal of the pole float must be at or above the height of the pole wiper.

(B) A pole wiper and a pole sleeve.

(C) A flexible enclosure device and either a gasketed or welded cap on the top of the guidepole.

(D) An internal guidepole sleeve, a pole wiper and either a gasketed or welded cap on the top of the guidepole.

(x) Each opening for a ladder that has at least one slotted leg must be equipped with one of the control device configurations specified in paragraph (a)(3)(x)(A), (B) or (C) of this section.

(A) A pole float in the slotted leg and pole wipers for both legs. The wiper or seal of the pole float must be at or above the height of the pole wiper.

(B) A ladder sleeve and pole wipers for both legs of the ladder.

(C) A flexible enclosure device and either a gasketed or welded cap on the top of the slotted leg.

(b) *Operational requirements.* (1) The floating roof must be floating on the liquid surface at all times, except that it may be supported by the leg supports or

other support devices (*e.g.,* hangers from the fixed roof) under the circumstances specified in paragraphs (b)(1)(i) through (vi) of this section. Any other floating roof landing event is a deviation and must be recorded, as specified in § 65.380(d)(1), and reported in your semiannual periodic report, as specified in § 65.384(b).

(i) During the initial fill.

(ii) When necessary for maintenance or inspection, including refill, provided you also comply with either paragraph (b)(1)(ii)(A) or (B) of this section.

(A) If the storage vessel does not need to be completely empty in order to perform the maintenance or inspection, then refill must begin no later than 24 hours after the roof is landed. Refill must be performed in accordance with paragraph (b)(2) of this section.

(B) If the storage vessel must be completely empty in order to perform the maintenance or inspection, then actions to completely empty the storage vessel must begin no later than 24 hours after the roof is landed. Refill may occur at any time after the storage vessel is completely empty.

(iii) When necessary to support a change in service to an incompatible liquid, including refill. Actions to completely empty the storage vessel must begin no later than 24 hours after the roof is landed. Refill may occur at any time after the storage vessel is completely empty.

(iv) When necessary to take the storage vessel out of service. Actions to completely empty the storage vessel must begin no later than 24 hours after the roof is landed.

(v) When the vapors are routed through a closed vent system to a non-flare control device that reduces regulated material emissions by at least 90 percent by weight from the time the floating roof is landed until the floating roof is within 10 percent by volume of being refloated. You must comply with the requirements in subpart M of this part for the closed vent system and the applicable non-flare control device(s). To demonstrate initial compliance with the 90-percent reduction requirement, you must conduct either a design evaluation, as specified in § 65.850, or a performance test, as specified in §§ 65.820 through 65.829.

(vi) When non-halogenated vapors are routed through a closed vent system to a flare that reduces regulated material emissions from the time the floating roof is landed until the floating roof is within 10 percent by volume of being refloated. You must comply with the requirements in subpart M of this part for the closed vent system and the requirements of § 63.11(b) of this chapter for the flare.

(2) Once you start filling or refilling a storage vessel that has a landed floating roof, you may not suspend filling or refilling until the roof is floating (except when the quantity of liquid produced in one batch is insufficient to float the roof, and the output from additional batches will be added before any material is withdrawn from the storage vessel), and you may not withdraw liquid from the storage vessel while simultaneously filling or refilling.

(3) Each cover over an opening in the floating roof, except for automatic bleeder vents (vacuum breaker vents) and rim space vents, must be closed at all times, except when the cover must be open for access.

(4) Each automatic bleeder vent (vacuum breaker vent) and rim space vent must be closed at all times, except when required to be open to relieve excess pressure or vacuum, in accordance with the manufacturer's design, and during periods when the floating roof is allowed to be supported by its legs or other support devices.

(5) Each guidepole cap and slotted ladder leg cap must be closed at all times except when gauging the liquid level or taking liquid samples.

(c) *Inspection requirements.* Inspect internal floating roofs in accordance with Table 2 to this subpart, and inspect external floating roofs in accordance with Table 3 to this subpart. You must also comply with paragraphs (c)(1) through (6) of this section, as specified in Table 2 to this subpart, or Table 3 to this subpart, as applicable. If a floating roof fails an inspection, comply with the repair requirements specified in paragraph (d) of this section. Keep records of the inspections, as specified in § 65.380(d)(2), and report inspection failures in your annual periodic report, as specified in § 65.386(a).

(1) Visually inspect for any of the conditions specified in paragraphs (c)(1)(i) through (iv) of this section at the frequency specified in Table 2 to this subpart or Table 3 to this subpart, as applicable. Observing any of these conditions constitutes an inspection failure. These inspections may be performed entirely from the top side of the floating roof, as long as there is visual access to all deck fittings and the top rim seal specified in paragraph (a) of this section.

(i) Stored liquid on the floating roof.

(ii) Holes or tears in the primary or secondary seal (if one is present).

(iii) Floating roof deck, deck fittings or rim seals that are not functioning as designed (as specified in paragraph (a) of this section).

(iv) Failure to comply with the operational requirements of paragraph (b) of this section.

(2) If you comply with Option 1 or Option 3 in Table 2 to this subpart or Option 1 in Table 3 to this subpart, inspect each deck fitting in accordance with paragraph (c)(2)(i) of this section. If you comply with Option 2 in Table 2 to this subpart or Option 3 in Table 3 to this subpart, monitor each deck fitting in accordance with paragraph (c)(2)(iii) of this section. If you comply with Option 2 in Table 3 to this subpart, monitor each deck fitting in accordance with paragraph (c)(2)(ii) of this section.

(i) Measure the gap between each deck fitting gasket or wiper (required by paragraph (a) of this section) and any surface that it is intended to seal. The inspector must attempt to slide a ⅛ inch diameter probe between the gasket or wiper and the surface against which it is intended to seal. Each location where the probe passes freely (without forcing or binding) between the two surfaces constitutes a gap and an inspection failure.

(ii) Use Method 21 of 40 CFR part 60, appendix A–7, in accordance with § 65.431(a) and (b) to monitor all sources of potential vapor leakage around each fitting. Conduct monitoring only when the roof is floating on the stored liquid. An instrument reading greater than 500 ppmv constitutes an inspection failure. This option may be used only for an EFR.

(iii) Monitor the deck fittings using an optical gas imaging instrument in accordance with the protocol for optical gas imaging, as specified in 40 CFR part 60, appendix K. You may use this monitoring option only if at least one compound in the emissions can be detected by the optical gas imaging instrument. Conduct monitoring only when the roof is floating on the stored liquid. Any imaged emissions constitutes an inspection failure.

(3) If you comply with Option 1 in Table 3 to this subpart, conduct seal gap inspections for an EFR by determining the presence and size of gaps between the rim seals and the wall of the storage vessel in accordance with the procedures specified in paragraph (c)(3)(i) through (iv) of this section. Any exceedance of the gap requirements specified in paragraphs (c)(3)(ii) and (iii) of this section constitutes inspection failure.

(i) Rim seals must be measured for gaps at one or more levels while the EFR is floating, as specified in paragraphs (c)(3)(i)(A) through (F) of this section.

(A) The inspector must hold a ⅛ inch diameter probe vertically against the inside of the storage vessel wall, just above the rim seal, and attempt to slide the probe down between the seal and the vessel wall. Each location where the probe passes freely (without forcing or binding against the seal) between the seal and the vessel wall constitutes a gap.

(B) Determine the length of each gap by inserting the probe into the gap (vertically) and sliding the probe along the vessel wall in each direction as far as it will travel freely without binding between the seal and the vessel wall. The circumferential length along which the probe can move freely is the gap length.

(C) Determine the maximum width of each gap by inserting probes of various diameters between the seal and the vessel wall. The smallest probe diameter should be ⅛ inch, and larger probes should have diameters in increments of ⅛ inch. The diameter of the largest probe that can be inserted freely anywhere along the length of the gap is the maximum gap width.

(D) Determine the average width of each gap by averaging the minimum gap width (⅛ inch) and the maximum gap width.

(E) The area of a gap is the product of the gap length and average gap width.

(F) Determine the ratio of accumulated area of rim seal gaps to storage vessel diameter by adding the area of each gap, and dividing the sum by the nominal diameter of the storage vessel. Determine this ratio separately for primary and secondary rim seals.

(ii) The ratio of seal gap area to vessel diameter for the primary seal must not exceed 10 square inches per foot of vessel diameter, and the maximum gap width must not exceed 1.5 inches.

(iii) The ratio of seal gap area to vessel diameter for the secondary seal must not exceed 1 square inch per foot, and the maximum gap width must not exceed 0.5 inches, except when you must pull back or remove the secondary seal to inspect the primary seal.

(iv) If you determine that it is unsafe to perform an EFR inspection as specified in paragraph (c)(3)(i) of this section, comply with the requirements of paragraph (c)(3)(iv)(A) or (B) of this section.

(A) Perform the inspection no later than 30 days after the determination that the floating roof is unsafe.

(B) Completely empty the storage vessel no later than 45 days after determining the floating roof is unsafe. If the vessel cannot be completely emptied within 45 days, you may utilize up to two extensions of up to 30 additional days each. Keep records documenting each decision to use an extension, as specified in § 65.380(d)(3).

(4) If you comply with Option 3 in Table 3 to this subpart, monitor the circumference of the floating roof when the roof is floating on stored liquid using an optical gas imaging instrument in accordance with the procedures specified in the protocol for optical gas imaging in 40 CFR part 60, appendix K. This monitoring option may be used only if at least one compound emitted from the storage vessel can be detected by the optical gas imaging instrument. Any imaged emissions constitutes an inspection failure.

(5) If you comply with Option 2 in Table 3 to this subpart, monitor the interface between the rim seal and the tank shell and any gaps in the secondary seal using Method 21 of 40 CFR part 60, appendix A–7, in accordance with § 65.431(a) and (b). Conduct monitoring when the roof is floating on stored liquid. An instrument reading greater than 500 ppmv constitutes an inspection failure.

(6) If you comply with Option 2 in Table 2 to this subpart, monitor the circumference of the IFR using an optical gas imaging instrument in accordance with the protocol for optical gas imaging, as specified in 40 CFR part 60, appendix K. You may use this monitoring option only if at least one compound in the emissions can be detected by the optical gas imaging instrument. Conduct monitoring when the roof is floating on stored liquid. Any imaged emissions constitutes an inspection failure.

(d) *Repair requirements.* Any condition causing an inspection failure under paragraph (c) of this section that is observed during an inspection required by paragraph (c) of this section or that you observe while conducting other activities on the storage vessel (*e.g.,* maintenance or sampling) must be repaired, as specified in paragraph (d)(1) or (2) of this section.

(1) If the inspection is performed while the storage vessel is completely empty, you must complete repairs before refilling the storage vessel with regulated material.

(2) If the inspection is performed while the storage vessel is not completely empty, you must complete repairs or completely empty the storage vessel within 45 days. If a repair cannot be completed or the vessel cannot be completely emptied within 45 days, you may use up to two extensions of up to 30 additional days each. Keep records documenting each decision to use an extension, as specified in § 65.380(d)(3). Not repairing or emptying the storage vessel within the time frame specified in this paragraph (d) is a deviation and must be reported in your semiannual periodic report, as specified in § 65.384(a).

(e) *Alternative means of emission limitation.* (1) An alternate device may be substituted for a device specified in paragraph (a) of this section if the alternate device has an emission factor less than or equal to the emission factor for the device specified in paragraph (a) of this section. Requests for the use of alternate devices must be submitted, as specified in § 65.388(b).

(2) Tests to determine emission factors for an alternate device must accurately simulate representative conditions under which the device and storage vessel will operate, such as wind speed, ambient and liquid temperatures, pressure or vacuum, and filling and withdrawal rates, but without creating an unsafe condition. You must include a copy of the proposed testing protocol in your request.

(f) *Floating roof landing monitoring requirements.* (1) Each storage vessel must be equipped with a system that provides a visual or audible signal when the floating roof (IFR or EFR) is about to be landed on its legs or other support devices (*e.g.,* hangers from the fixed roof).

(2) Each time a floating roof is landed, even if the alarm did not activate, estimate the amount of regulated material emitted to the atmosphere during the time the floating roof is landed. Keep records of this emissions estimate, as specified in § 65.380(d)(1). Report the estimated emissions in your annual periodic report, as specified in § 65.386(b).

(g) *Overfill monitoring requirements.* (1) Each storage vessel must be equipped with monitoring equipment that provides a visual or audible signal when the storage vessel is about to be overfilled.

(2) Each time the storage vessel is overfilled, estimate the amount of regulated material spilled and the amount emitted to the atmosphere. Keep records of this emissions estimate, as specified in § 65.380(i). Report the estimated emissions in your annual periodic report, as specified in § 65.386(c).

§ 65.320 What requirements must I meet for a fixed roof atmospheric storage vessel if I use vapor balance?

If you elect to use vapor balancing to control emissions from a fixed roof storage vessel, you must comply with the requirements in paragraphs (a) through (d) of this section.

(a) *Fixed roof requirements.* Operate and maintain the fixed roof, as specified in § 65.310(a) and (b), except that § 65.310(b)(2)(ii) does not apply for the purposes of this section; monitor the fixed roof, as specified in § 65.310(c); and repair leaks, as specified in § 65.310(d). Keep records of monitoring and repair, as specified in § 65.380(e)(1), and report deviations in your semiannual periodic report, as specified in §§ 65.310(d) and 65.384(a).

(b) *Vapor balance requirements.* (1) *Design requirements.* (i) The vapor balancing system must be designed and operated to route vapors displaced from loading of the storage vessel to the transport vehicle or barge from which the storage vessel is filled.

(ii) All vapor connections and lines on the storage vessel must be equipped with closures that seal upon disconnect.

(2) *Testing requirements.* (i) Transport vehicles must have a current certification in accordance with the U.S. Department of Transportation (DOT) pressure test requirements of 49 CFR part 180 for cargo tanks and 49 CFR 173.31 for tank cars. Keep records of these certifications, as specified in § 65.380(e)(2).

(ii) Barges must have been pressure tested for vapor tightness within the 365-day period prior to being used in a vapor balancing system to comply with the control requirements in this section. Pressure testing must be conducted in accordance with paragraphs (b)(2)(ii)(A) through (F) of this section, and you must maintain copies of documentation showing the required testing was conducted, as specified in § 65.380(e)(3). You must either conduct the test at your facility or obtain documentation of the test from the barge owner or operator.

(A) Each barge must be pressurized with dry air or inert gas to no more than the pressure of the lowest-pressure relief valve setting.

(B) Once the pressure is obtained, the dry air or inert gas source must be shut off.

(C) At the end of ½ hour, the pressure in the barge and piping must be measured. The change in pressure must be calculated using Equation 1 of this section.

$$P = P_i - P_f \qquad \text{(Eq. 1)}$$

Where:

P = Change in pressure, inches of water.

P_i = Pressure in barge when air/gas source is shut off, inches of water.

P_f = Pressure in barge at the end of ½ hour after air/gas is shut off, inches of water.

(D) The change in pressure, P, must be compared to the pressure drop calculated using Equation 2 of this section.

$$PM = 0.861 \times P_i \times (L/V) \qquad \text{(Eq. 2)}$$

Where:

PM = Maximum allowable pressure change, inches of water.

P_i = Pressure in barge when air/gas source is shut off, pounds per square inch absolute (psia).

L = Maximum permitted loading rate of the barge, barrels per hour

V = Total volume of barge, barrels.

(E) If P is less than or equal to PM, the vessel is vapor tight.

(F) If P is greater than PM, the vessel is not vapor tight and the source of the leak must be identified and repaired before retesting.

(3) Monitoring requirements. For pieces of equipment in the vapor balancing system, comply with § 65.325(b) and (d), except as specified in paragraphs (b)(3)(i) through (iii) of this section. Keep records, as specified in § 65.380(e)(5).

(i) When § 65.325(b) refers to a ''closed vent system,'' it means a ''vapor balancing system'' for the purposes of this section.

(ii) When subpart M of this part, which is referenced from § 65.325(b), refers to ''bypass lines that divert a vent stream away from a control device and to the atmosphere,'' it means ''bypass lines that divert displaced storage vessel emissions to the atmosphere and away from the transport vehicle or barge from which the storage vessel is being filled'' for the purposes of this section.

(iii) As an alternative to the otherwise applicable monitoring requirements specified in subpart J of this part, you may elect to comply with the alternative monitoring frequencies in § 65.440 for equipment in a vapor balancing system that convey emissions from a storage vessel for the purposes of this subpart.

(c) *Operating requirements.* (1) Liquid must be unloaded only when the transport vehicle's vapor collection equipment or barge's vapor collection equipment is connected to the storage vessel's vapor balancing system.

(2) Each pressure relief device on the storage vessel or on the transport vehicle or barge must remain closed while the storage vessel is being filled.

(3) Pressure relief devices on storage vessels must be set to no less than 2.5 pounds per square inch gauge (psig) at all times to prevent breathing losses, unless you provide rationale in the Notification of Compliance Status specified in § 65.382(c) explaining why a lower value is sufficient to prevent breathing losses at all times or control breathing losses by another method. Keep records of the vent settings, as specified in § 65.380(e)(4).

(d) *Overfill monitoring requirements.* Comply with the monitoring and alarm requirements and related recordkeeping and reporting requirements specified in § 65.315(g).

§ 65.325 What requirements must I meet for a fixed roof atmospheric storage vessel if I route emissions through a closed vent system to a control device?

If you elect to control emissions from a fixed roof atmospheric storage vessel by routing emissions through a closed vent system to a control device, you must comply with the requirements in paragraphs (a) through (e) of this section.

(a) *Fixed roof requirements.* Except as specified in paragraph (e) of this section, operate and maintain the fixed roof, as specified in § 65.310(a) and (b), except that § 65.310(b)(2)(ii) does not apply for the purposes of this section; monitor the fixed roof, as specified in § 65.310(c); and repair leaks, as specified in § 65.310(d). Keep records of monitoring and repair, as specified in § 65.380(f)(1), and report deviations in your semiannual periodic report, as specified in §§ 65.310(d) and 65.384(a).

(b) *Closed vent system requirements.* Except as specified in paragraph (e) of this section, for the closed vent system, comply with the requirements specified in § 65.720(b) through (d) and paragraphs (b)(1) through (3) of this section.

(1) Equipment in the closed vent system is in regulated material service when it conveys emissions from the storage vessel. For such equipment, comply with § 65.410(a) or (c) and applicable sections referenced therein, except that § 65.410(a)(2)(ii) does not apply for the purposes of this subpart. When § 65.410(c) refers to ''your referencing subpart,'' it means ''the subpart that references subpart I.'' You must conduct the monitoring while the equipment is in regulated material service.

(2) Comply with § 65.430 for each potential source of emissions in the closed vent system that is not defined as

a piece of equipment. Keep identification records, as specified in § 65.380(f)(5).

(3) Keep records, as specified in § 65.380(f)(2).

(c) *Control device requirements.* Comply with the requirements specified in paragraphs (c)(1) through (4) of this section, as applicable. Keep records, as specified in § 65.380(f)(3).

(1) A non-flare control device must meet the requirements for the applicable control device in subpart M of this part; and reduce organic regulated material emissions by at least 95 percent by weight or to an outlet concentration of regulated material less than 20 ppmv. If the regulated material is a subset of organic compounds (*e.g.,* hazardous air pollutants (HAP)), you may demonstrate compliance by reducing emissions to an outlet concentration less than 20 ppmv as total organic compounds (TOC). You must reduce the hydrogen halide and halogen emissions from combusted halogenated vent streams, as defined in § 65.295, by at least 99 percent by weight or to an outlet concentration less than 20 ppmv. The halogenated vent stream determination must be based on the emission rate at the maximum expected fill rate of the storage vessel.

(2) A flare must meet the requirements of § 63.11(b) of this chapter. You must not use a flare to control halogenated vent streams, as defined in § 65.295.

(3) To demonstrate initial compliance with the emission limit(s) specified in paragraph (c)(1) of this section, you must conduct either a design evaluation, as specified in § 65.850, or a performance test, as specified in §§ 65.820 through 65.829.

(4) During periods of planned routine maintenance of a control device, operate the storage vessel in accordance with paragraphs (c)(4)(i) and (ii) of this section. Keep records, as specified in § 65.380(f)(4).

(i) Do not add material to the storage vessel during periods of planned routine maintenance.

(ii) Limit periods of planned routine maintenance for each control device to no more than 360 hours per year (hr/yr).

(d) *Overfill monitoring requirements.* Comply with the monitoring and alarm requirements and related recordkeeping and reporting requirements specified in § 65.315(g).

(e) *Alternative requirements.* Paragraphs (a) and (b) of this section do not apply if the fixed roof and closed vent system are maintained in vacuum service, provided you comply with § 65.410(b)(1) through (3) for fittings on the fixed roof and equipment in the closed vent system and you keep records, as specified in § 65.380(f)(2).

§ 65.330 What requirements must I meet for a fixed roof atmospheric storage vessel if I route emissions to a fuel gas system?

If you elect to control emissions from a fixed roof storage vessel by routing emissions to a fuel gas system, you must comply with paragraphs (a) through (d) of this section.

(a) *Fixed roof requirements.* Except as specified in paragraph (d) of this section, operate and maintain the fixed roof, as specified in § 65.310(a) and (b), except that § 65.310(b)(2)(ii) does not apply for the purposes of this section; monitor the fixed roof, as specified in § 65.310(c); and repair leaks, as specified in § 65.310(d). Keep records of monitoring and repair, as specified in § 65.380(g)(1), and report deviations in your semiannual periodic report, as specified in §§ 65.310(d) and 65.384(a).

(b) *Fuel gas system requirements.* Except as specified in paragraph (d) of this section, comply with the requirements specified in paragraphs (b)(1) through (3) of this section.

(1) Comply with the requirements for fuel gas systems as specified in § 65.732(a), (c), and (d).

(2) Comply with the requirements for equipment leaks, as specified in subpart J of this part and paragraphs (b)(2)(i) and (ii) of this section.

(i) Equipment in the fuel gas system is in regulated material service when it conveys emissions from the storage vessel. For such equipment, comply with § 65.410(a) or (c) and applicable sections referenced therein, except that § 65.410(a)(2)(ii) does not apply for the purposes of this subpart. When § 65.410(c) refers to ''your referencing subpart,'' it means ''the subpart that references subpart I.'' You must conduct the monitoring while the equipment is in regulated material service.

(ii) Comply with § 65.430 for each potential source of emissions from the fuel gas system that is not defined as a piece of equipment (*e.g.,* an access hatch). Keep identification records, as specified in § 65.380(g)(3).

(3) Keep records of the fuel gas system, as specified in § 65.380(g)(2).

(c) *Overfill monitoring requirements.* Comply with the monitoring and alarm requirements and related recordkeeping and reporting requirements specified in § 65.315(g).

(d) *Alternative requirements.* Paragraphs (a) and (b) of this section do not apply if the fixed roof and fuel gas system are maintained in vacuum service, provided you comply with § 65.410(b)(1) through (3) for fittings on the fixed roof and equipment in the fuel gas system and you keep records, as specified in § 65.380(g)(2).

§ 65.340 What requirements must I meet for a pressure vessel?

If you have a pressure vessel that contains any regulated material, you must operate and maintain the pressure vessel, as specified in paragraphs (a) through (d) of this section.

(a) The pressure vessel must be designed to operate with no detectable emissions at all times.

(b) All openings in the pressure vessel must be equipped with closure devices.

(c) Conduct initial and annual performance tests by monitoring in accordance with either paragraph (c)(1) or (2) of this section to demonstrate compliance with paragraph (a) of this section.

(1) Monitor each point on the pressure vessel through which regulated material could potentially be emitted using Method 21 of 40 CFR part 60, appendix A–7, in accordance with the procedures specified in § 65.431(a) and (b) and paragraphs (c)(1)(i) through (iii) of this section.

(i) When § 65.431(a)(5) refers to ''monitoring when the equipment in regulated material service or in use with any other detectable material,'' it means ''monitoring when the pressure vessel contains a regulated material with a concentration representative of the range of concentrations for the materials expected to be stored in the pressure vessel'' for the purposes of this section.

(ii) Section 65.431(a)(6) does not apply for the purposes of this section.

(iii) Each instrument reading greater than 500 ppmv is a deviation. Comply with paragraphs (c)(1)(iii)(A) through (C) of this section each time you obtain an instrument reading greater than 500 ppmv.

(A) Estimate the flow rate and total regulated material emissions from the defect. Assume the pressure vessel has been emitting for half of the time since the last performance test, unless other information supports a different assumption.

(B) Keep records of the performance test and emission estimates, as specified in § 65.380(h)(1).

(C) Submit information in your semiannual periodic report, as specified in § 65.384(c).

(2) Monitor each point on the pressure vessel through which regulated material potentially could be emitted using an optical gas imaging instrument, as specified in paragraphs (c)(2)(i) and (ii) of this section.

(i) Operate and maintain the optical gas imaging instrument in accordance with the protocol for optical gas imaging

in 40 CFR part 60, appendix K. The optical gas imaging instrument must be able to detect at least one compound emitted from the storage vessel.

(ii) Each image of emissions is a deviation. Comply with paragraphs (c)(2)(ii)(A) and (B) of this section each time you detect an image when using an optical gas imaging instrument.

(A) Estimate emissions, as specified in paragraph (c)(1)(iii)(A) of this section.

(B) Keep records and report information, as specified in paragraphs (c)(1)(iii)(B) and (C) of this section.

(d) Whenever material regulated by a referencing subpart is in the pressure vessel, operate the pressure vessel as a closed system that does not vent to the atmosphere except at those times when purging of inerts or noncondensables from the pressure vessel is required and the purge stream is routed through a closed vent system to a control device in accordance with paragraphs (d)(1) through (3) of this section, as applicable. Keep records, as specified in § 65.380(h)(2), and report deviations in your semiannual periodic report, as specified in § 65.384(c).

(1) For the closed vent system, comply with § 65.325(b).

(2) For a non-flare control device, comply with requirements for the applicable control device in subpart M of this part, and comply with paragraphs (d)(2)(i) and (ii) of this section.

(i) A non-flare control device must reduce organic regulated material emissions by at least 98 percent by weight or to an outlet concentration of total regulated material less than 20 ppmv. If the regulated material is a subset of organic compounds (*e.g.,* HAP), you may demonstrate compliance by reducing emissions to an outlet concentration less than 20 ppmv as TOC. You must reduce the hydrogen halide and halogen emissions from combusted halogenated vent streams, as defined in § 65.295, by at least 99 percent by weight or to an outlet concentration less than 20 ppmv. The halogenated vent stream determination must be based on the emission rate at the maximum expected fill rate of the pressure vessel.

(ii) To demonstrate initial compliance with the emission limit(s) specified in paragraph (d)(2)(i) of this section, you must conduct either a design evaluation, as specified in § 65.850, or a performance test, as specified in §§ 65.820 through 65.829.

(3) For a flare, comply with the requirements of § 63.11(b) of this chapter. You must not use a flare to control halogenated vent streams, as defined in § 65.295.

Standards and Compliance Requirements for Transfer Operations

§ 65.360 What requirements must I meet for control of transport vehicles and transfer operations to load transport vehicles?

For each transfer rack that is used to load transport vehicles with regulated material, you must comply with paragraphs (a) and (b) of this section. You must also comply with paragraph (c) of this section for transport vehicles that are loaded with regulated material.

(a) *Transfer method.* Transfer regulated liquids to transport vehicles using submerged loading or bottom loading.

(b) *Displaced emissions control.* For each loading arm that transfers regulated material at a facility that transfers through all transfer racks a total of more than 35 million gallons per year (gal/yr) of liquids with a weighted average MTVP equal to or greater than 4 psia, comply with either paragraph (b)(1), (2) or (3) of this section.

(1) Route displaced emissions from the transport vehicle through a closed vent system to a control device and comply with paragraphs (b)(1)(i) through (iii) of this section. Keep records, as specified in § 65.380(j)(2).

(i) For the closed vent system, comply with the requirements specified in § 65.720(b) through (d) and paragraphs (b)(1)(i)(A) through (C) of this section.

(A) Determine if a piece of equipment in the closed vent system is in regulated material service, based on the MTVP of each transferred material that generates vapor that contacts the equipment. If any such vapor meets the definition of ''in regulated material service,'' comply with § 65.410(a) or (c) and applicable sections referenced therein, except that § 65.410(a)(2)(ii) does not apply for the purposes of this subpart. When § 65.410(c) refers to ''your referencing subpart'' it means ''the subpart that references subpart I.'' If equipment in the closed vent system contacts regulated material from transfers, but is not in regulated material service, comply with requirements in § 65.430, unless you are required to comply with § 65.429 for other emissions conveyed by the closed vent system.

(B) If equipment in the closed vent system is determined to be in regulated material service, conduct monitoring and inspections when the closed vent system is conveying vapor that causes the equipment in the closed vent system to be in regulated material service (*e.g.,* when transferring material that generates vapor that meets the threshold for ''in regulated material service''). If equipment in the closed vent system contacts regulated material, but is not in regulated material service, conduct inspections when regulated material vapors are flowing through the closed vent system (*e.g.,* when filling any transport vehicle that generates vapor that contains regulated material). No monitoring or inspection is required during monitoring periods when the closed vent system conveys no regulated material.

(C) Comply with § 65.430 for each potential source of vapor leakage in the closed vent system that is not defined as a piece of equipment. Keep identification records, as specified in § 65.380(j)(3).

(ii) For a non-flare control device, comply with the applicable requirements in subpart M of this part, and comply with paragraphs (b)(1)(ii)(A) and (B) of this section.

(A) A non-flare control device must reduce organic regulated material emissions by at least 95 percent by weight or to an outlet concentration of total organic regulated material less than 20 ppmv. If the regulated material is a subset of organic compounds (*e.g.,* HAP), you may demonstrate compliance by reducing emissions to an outlet concentration less than 20 ppmv as TOC. You must reduce the hydrogen halide and halogen emissions from combusted halogenated vent streams, as defined in § 65.295, by at least 99 percent by weight or to an outlet concentration less than 20 ppmv. The halogenated vent stream determination must be based on the emission rate at the maximum expected fill rate of the pressure vessel.

(B) To demonstrate initial compliance with the emission limit specified in paragraph (b)(1)(ii)(A) of this section, you must conduct either a design evaluation, as specified in § 65.850, or a performance test, as specified in §§ 65.820 through 65.829.

(iii) For flares, comply with the requirements of § 63.11(b) of this chapter. You must not use a flare to control halogenated vent streams, as defined in § 65.295.

(2) Route displaced emissions from the transport vehicle to a fuel gas system and comply with the requirements specified in paragraphs (b)(2)(i) through (iii) of this section.

(i) Comply with the requirements for fuel gas systems, as specified in § 65.732(a), (c) and (d).

(ii) For equipment in the fuel gas system, comply with the requirements for equipment leaks, as specified in subpart J of this part, and paragraphs (b)(2)(ii)(A) through (C) of this section.

(A) Determine if a piece of equipment in the fuel gas system is in regulated

material service, based on the MTVP of each transferred material that generates vapor that contacts the equipment. If any such vapor meets the definition of ''in regulated material service,'' comply with § 65.410(a) or (c) and applicable sections referenced therein, except that § 65.410(a)(2)(ii) does not apply for the purposes of this subpart. When § 65.410(c) refers to ''your referencing subpart,'' it means ''the subpart that references subpart I.'' If equipment in the fuel gas system contacts regulated material from transfers, but is not in regulated material service, comply with requirements specified in § 65.430, unless you are required to comply with § 65.427 for other emissions conveyed by the fuel gas system (*e.g.,* process vent emissions).

(B) For equipment in the fuel gas system that is determined to be in regulated material service, conduct monitoring and inspections, while transferring any material that generates vapor that causes the equipment in the fuel gas system to be in regulated material service. Alternatively, you may conduct monitoring and inspections when the fuel gas system is conveying vapors from other emission points that cause the equipment to be in regulated material service. If equipment in the fuel gas system contacts regulated material, but is not in regulated material service, conduct inspections when regulated material vapors are flowing through the fuel gas system (*e.g.,* when filling any transport vehicle with liquid that contains regulated material).

(C) Comply with § 65.430 for each potential source of emissions in the fuel gas system that is not defined as a piece of equipment. Keep identification records, as specified in § 65.380(j)(3).

(iii) Keep records, as specified in § 65.380(j)(7).

(3) Design and operate a vapor balancing system, as specified in paragraphs (b)(3)(i) through (v) of this section. This option may not be used if the applicable storage vessel is controlled using a floating roof. Keep records, as specified in § 65.380(j)(5).

(i) The vapor balancing system must be designed to route vapors displaced from the loading of regulated liquids into transport vehicles back to the storage vessel from which the liquid being loaded originated or to another storage vessel connected to a common header.

(ii) The vapor balancing system must be designed to prevent any regulated material vapors collected at one transfer rack from passing to another transfer rack.

(iii) All vapor connections and lines in the vapor collection equipment and vapor balancing system must be equipped with closures that seal upon disconnect.

(iv) Each pressure relief device on the transport vehicle and storage vessel must remain closed while the transport vehicle is being filled with regulated material.

(v) For pieces of equipment in the vapor balancing system, comply with paragraph (b)(1)(i) of this section, except that when paragraph (b)(1)(i) of this section refers to a ''closed vent system,'' it means a ''vapor balancing system'' for the purposes of this section.

(c) Transport vehicles. (1) Except when loading transport vehicles that meet the requirements in paragraph (c)(2) of this section, you must ensure that regulated material liquids are loaded only into transport vehicles that have a current certification in accordance with the DOT pressure test requirements in 49 CFR part 180 for cargo tanks or 49 CFR 173.31 for tank cars. Keep records of these certifications, as specified in § 65.380(j)(6).

(2) Each transport vehicle that is loaded with regulated material that has a MTVP greater than 4 psia at a transfer rack that is subject to this section must pass an annual vapor tightness test conducted using Method 27 of 40 CFR part 60, appendix A–8. Either you or the owner of the transport vehicle may conduct the test. Conduct the test using a time period (t) for the pressure and vacuum tests of 5 minutes. The initial pressure (P_i) for the pressure test must be 460 millimeters (mm) of water, gauge. The initial vacuum (V_i) for the vacuum test must be 150 mm of water, gauge. The maximum allowable pressure and vacuum changes (Δp, Δv) for transport vehicles is 25 mm of water, or less, in 5 minutes. Keep records of each test, as specified in § 65.380(j)(1).

(3) You must act to assure that your vapor balancing system, closed vent system or fuel gas system is connected to the transport vehicle's vapor collection equipment during each loading of a transport vehicle at the regulated source. Examples of actions to accomplish this include training drivers in the hookup procedures and posting visible reminder signs at the transfer racks that load regulated material.

§ 65.370 What requirements must I meet for control of transfer operations to load containers?

For each transfer rack that is used to load containers, you must comply with paragraphs (a) through (c) of this section, as applicable.

(a) Except as specified in paragraph (c) of this section, you must transfer regulated material into containers using either submerged fill or a fitted opening in the top of the container through which the regulated material is filled, with subsequent purging of the transfer line before removing it from the container opening.

(b) Whenever a container that is subject to this paragraph contains a regulated material, you must install all covers and closure devices for the container, and secure and maintain each closure device in the closed position, except when access to the container is necessary, such as for adding or removing material, sampling or cleaning. If the container is 55 gallons (gal) or larger, the transferred liquid has a MTVP greater than 4 psia, and the container is used for onsite storage, comply with either paragraph (b)(1) or (2) of this section.

(1) Demonstrate initially and at least annually that the container is vapor tight by testing in accordance with Method 27 of 40 CFR part 60, appendix A–8. Conduct the test using a time period (t) for the pressure and vacuum tests of 5 minutes. The initial pressure (P_i) for the pressure test must be 460 mm of water, gauge. The initial vacuum (V_i) for the vacuum test must be 150 mm of water, gauge. The maximum allowable pressure and vacuum changes (Δp, Δv) for all tested containers is 76 mm of water, or less, in 5 minutes. Keep records of each test, as specified in § 65.380(j)(1).

(2) Monitor annually each potential leak interface on the container using Method 21 of 40 CFR part 60, appendix A–7, in accordance with § 65.431(a) and (b), and paragraphs (b)(2)(i) through (iv) of this section.

(i) Section 65.431(a)(6) does not apply for the purposes of this section.

(ii) When § 65.431(a) and (b) refers to ''equipment,'' it means ''each potential leak interface on the container'' for the purposes of this section.

(iii) A leak is identified when you obtain an instrument reading greater than 500 ppmv.

(iv) For each leak, either repair the leak or empty the container within 15 days after detecting the leak.

(c) As an alternative to complying with paragraph (a) of this section, you may elect to control displaced vapors generated when filling the container in accordance with paragraph (c)(1), (2) or (3) of this section, as applicable.

(1) Design and operate a vapor balancing system to route vapors displaced from the loading of regulated material into containers directly (*e.g.,* no intervening tank or containment area, such as a room) to the storage vessel from which the liquid being loaded

originated or to another storage vessel connected to a common header. For equipment in the vapor balancing system, comply with § 65.360(b)(3), except when § 65.360(b)(1)(i), which is referenced from § 65.360(b)(3), refers to a ''transport vehicle,'' it means a ''container'' for the purposes of this section. Keep records, as specified in § 65.380(j)(5).

(2) Vent displaced emissions directly through a closed vent system to a control device in accordance with paragraph (c)(2)(i) through (iii) of this section.

(i) Comply with § 65.360(b)(1)(i) for the closed vent system, except that when § 65.360(b)(1)(i) refers to a ''transport vehicle,'' it means a ''container'' for the purposes of this section.

(ii) Comply with § 65.360(b)(1)(ii) or (iii) for the applicable control device.

(iii) Keep records, as specified in § 65.380(j)(2).

(3) When filling, locate the containers in an enclosure that is exhausted through a closed vent system to a control device, as specified in paragraphs (c)(3)(i) and (ii) of this section.

(i) Design and operate the enclosure in accordance with the criteria for a permanent total enclosure, as specified in ''Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure'' under 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of containers through the enclosure by conveyor or other mechanical means; entry of permanent mechanical or electrical devices; or to direct airflow into the enclosure. Perform the verification procedure for the enclosure, as specified in Section 5.0 to ''Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure'' initially when the enclosure is first installed and, thereafter, annually. Keep records of these verifications, as specified in § 65.380(j)(4).

(ii) Comply with § 65.360(b)(1)(i) for the closed vent system and comply with § 65.360(b)(1)(ii) or (iii) for the applicable control device.

Recordkeeping and Reporting

§ 65.380 What records must I keep?

(a) *Vessel dimensions and storage capacity.* For each storage vessel that is subject to the referencing subpart, keep a record of the dimensions of the storage vessel and an analysis of the storage capacity of the storage vessel.

(b) *Liquid stored and MTVP.* (1) Keep a list of all the types of liquids stored.

(2) Keep a record of each MTVP determination and the supporting information used in the determination.

(c) *Monitoring and repair records for fixed roofs complying with § 65.310, § 65.320, § 65.325 or § 65.330.* (1) Record the date of each monitoring required by § 65.310(c).

(2) For each leak detected during monitoring required by § 65.310(c), record the location of the leak, a description of the leak, the date of detection, a description of actions taken to repair the defect and the date repair was completed. When using Method 21 of 40 CFR part 60, appendix A–7, keep a record of the instrument reading. When using optical gas imaging, keep a record of the video image.

(3) If you elect to use an extension in accordance with § 65.310(d), keep records, as specified in paragraphs (c)(3)(i) through (iii) of this section.

(i) Records for a first extension must include a description of the defect, documentation that alternative storage capacity was unavailable in the 45-day period after the inspection and a schedule of actions that you took in an effort to either repair or completely empty the storage vessel during the extension period.

(ii) For a second extension, if needed, you must maintain records documenting that alternative storage capacity was unavailable during the first extension period and a schedule of the actions you took to ensure that the control device was repaired or the vessel was completely emptied by the end of the second extension period.

(iii) Record the date on which the storage vessel was completely emptied, if applicable.

(4) If applicable, maintain a copy of the written plan required by § 65.310(c)(2)(ii) for parts of fixed roofs that are unsafe to monitor.

(d) *Records for floating roofs complying with § 65.315. (1) Floating roof landings.* For each floating roof landing, keep the records specified in paragraphs (d)(1)(i) through (iv) of this section, as required by § 65.315(f)(2).

(i) The date when a floating roof is set on its legs or other support devices.

(ii) The date when the roof was refloated.

(iii) Whether the process of refloating was continuous (*i.e.,* once started, filling or refilling was not suspended until the roof was refloated, except for filling from batch production, as specified in § 65.315(b)(2)).

(iv) Estimated emissions from the landing event.

(2) *Inspection results.* Keep records of floating roof inspection results, as specified in paragraphs (d)(2)(i) and (ii) of this section, as required by § 65.315(c).

(i) If the floating roof passes inspection, keep a record that includes the information specified in paragraphs (d)(2)(i)(A) and (B) of this section. If the floating roof fails inspection, keep a record that includes the information specified in paragraphs (d)(2)(i)(A) through (E) of this section.

(A) Identification of the storage vessel that was inspected.

(B) The date of the inspection.

(C) A description of all inspection failures.

(D) A description of all repairs and the dates they were made.

(E) The date the storage vessel was completely emptied, if applicable.

(ii) Keep records of the data specified in paragraphs (d)(2)(ii)(A) through (C) of this section, as applicable for EFR inspections and monitoring.

(A) EFR seal gap measurements, including the raw data obtained and any calculations performed, as required by § 65.315(c)(3).

(B) Instrument readings when monitoring is conducted using Method 21 of 40 CFR part 60, appendix A–7.

(C) A record of the video image when monitoring is conducted using optical gas imaging.

(3) *Documentation of inspection and repair extensions.* If you elect to use an extension in accordance with § 65.315(c)(3)(iv)(B) or (d)(2), keep records, as specified in paragraphs (d)(3)(i) through (iii) of this section.

(i) Records for a first extension must include an explanation of why it was unsafe to perform the inspection, documentation that alternative storage capacity was unavailable during the 45-day period after determining the floating roof is unsafe to inspect and a schedule of actions that you took in an effort to completely empty the storage vessel during the extension period.

(ii) For a second extension, if needed, you must maintain records documenting that alternative storage capacity was unavailable during the first extension period and a schedule of actions that you took to ensure that the vessel was completely emptied by the end of the second extension period.

(iii) Record the date on which the storage vessel was completely emptied, if applicable.

(e) *Records for fixed roof storage vessels that vapor balance to comply with § 65.320.* (1) Keep records of fixed roof monitoring and repair, as specified in paragraph (c) of this section.

(2) For transport vehicles, keep records of DOT certification(s) required by § 65.320(b)(2)(i).

(3) For barges, keep records of vapor tightness pressure test documentation

required by § 65.320(b)(2)(ii). The documentation must include the information in paragraphs (e)(3)(i) through (ix) of this section.

(i) Test title: Barge Pressure Test.

(ii) Barge owner and address.

(iii) Barge identification number.

(iv) Testing location.

(v) Test date.

(vi) Tester name and signature.

(vii) Witnessing inspector, if any: Name, signature and affiliation.

(viii) Initial and final test pressures and the time at the beginning and end of the test.

(ix) Test results: Actual pressure change in 30 minutes, mm of water.

(4) Keep records of the pressure relief vent setting that prevents breathing losses from the storage vessel required by § 65.320(c)(3).

(5) For equipment in the vapor balancing system, keep records, as required by subpart J of this part.

(f) *Records for fixed roof storage vessels vented to a control device complying with § 65.325.* (1) Keep records of fixed roof monitoring and repair, as specified in paragraph (c) of this section.

(2) For the closed vent system, keep records, as specified in subpart J of this part and subpart M of this part.

(3) For a non-flare control device, keep the applicable records specified in subpart M of this part. For flares, keep records of all visual emissions observed, periods when a pilot flame is out, and any periods that the pilot flames are not monitored.

(4) Record the day and time at which planned routine maintenance periods begin and end, and the type of maintenance performed on the control device. If you need more than 240 hr/yr, keep a record that explains why additional time up to 360 hr/yr was needed and describes how you minimized the amount of additional time needed.

(5) Keep a record identifying each potential source of vapor leakage in the closed vent system that is not defined as a piece of equipment, as required by § 65.325(b)(2).

(g) *Records for fixed roof storage vessels vented to a fuel gas system complying with § 65.330.* (1) Keep records of fixed roof monitoring and repair, as specified in paragraph (c) of this section.

(2) For the fuel gas system, keep records, as specified in subpart J of this part and subpart M of this part.

(3) Keep a record identifying each potential source of vapor leakage in the fuel gas system that is not defined as a piece of equipment, as required by § 65.330(b)(2).

(h) *Records for pressure vessels complying with § 65.340.* (1) For each performance test required by § 65.340(c), keep records of the information in paragraphs (h)(1)(i) through (iii).

(i) The date of the test.

(ii) The instrument reading (and background level, if you adjust for background, as described in § 65.431(a)(7)), if you test using Method 21 of 40 CFR part 60, appendix A–7.

(iii) The video image, if you test using optical gas imaging.

(2) Keep records of the information in paragraphs (h)(2)(i) through (iv) of this section when the performance test required by § 65.340(c) detects a defect.

(i) Date each defect was detected.

(ii) Date of the next performance test that shows either the instrument reading is less than 500 ppmv when using Method 21 of 40 CFR part 60, appendix A–7, or no image is detected when using an optical gas imaging instrument.

(iii) Start and end dates of each period after the date in paragraph (h)(2)(i) of this section when the pressure vessel was completely empty.

(iv) Estimated emissions from each defect.

(3) When complying with § 65.340(d), keep records for the closed vent system, as specified in subpart J of this part and subpart M of this part, and for a non-flare control device, keep the applicable records specified in subpart M of this part. For flares, keep records of all visual emissions observed, periods when a pilot flame is out, and any periods that the pilot flames are not monitored.

(i) *Records of overfilling.* For each storage vessel that is subject to § 65.305(b), keep records of each date when the storage vessel is overfilled and estimates of the amount of regulated material spilled and emitted to the atmosphere, as required by § 65.315(g), § 65.320(d), § 65.325(d), or § 65.330(c).

(j) *Records for transfer operations.* (1) Keep records of the information listed in paragraphs (j)(1)(i) through (ix) of this section for each transport vehicle and container for which testing using Method 27 of 40 CFR part 60, appendix A–8 is required by § 65.360(c)(2) or § 65.370(b)(1). You must update the documentation file for each subject transport vehicle and container at least once per year to reflect current test results, as determined by Method 27 of 40 CFR part 60, appendix A–8.

(i) Test title: Transport Vehicle or Container Pressure Test—EPA Reference Method 27.

(ii) Transport vehicle or container owner and address.

(iii) Transport vehicle or container identification number.

(iv) Testing location.

(v) Date of test.

(vi) Tester name and signature.

(vii) Witnessing inspector, if any: Name, signature and affiliation.

(viii) Initial and final test pressures, initial and final test vacuums and the time at the beginning and end of the test.

(ix) Test results: Actual pressure and vacuum changes in 5 minutes, mm of water (average for 2 runs, as required by Method 27 of 40 CFR part 60, appendix A–8).

(2) If you use a closed vent system and control device, as specified in § 65.360(b)(1) or § 65.370(c)(2)(ii), keep records for the closed vent system, as specified in subpart J of this part and subpart M of this part, and for a non-flare control device, keep the applicable records specified in subpart M of this part. For flares, keep records of all visual emissions observed, periods when a pilot flame is out, and any periods that the pilot flames are not monitored.

(3) Keep a record identifying each potential source of vapor leakage in the closed vent system or fuel gas system that is not defined as a piece of equipment, as required by § 65.360(b)(1)(i)(C) or (2)(ii)(C).

(4) For containers filled inside an enclosure, as specified in § 65.370(c)(3)(i), keep records of the most recent set of calculations and measurements performed to verify that the enclosure meets the criteria of a permanent total enclosure, as specified in ''Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure'' under 40 CFR 52.741, appendix B.

(5) If you use a vapor balancing system, as specified in § 65.360(b)(3) or § 65.370(c)(1), keep records of the date of each sensory inspection or instrument monitoring, the number of potential leaks to the atmosphere that you identified and the records required by subpart J of this part for monitoring conducted in accordance with § 65.430(b)(2) and the requirements referenced therein.

(6) For transport vehicles, keep records of DOT certification(s) required by § 65.360(c)(1).

(7) If you route emissions from transport vehicles to a fuel gas system, as specified in § 65.360(b)(2), keep records as specified in subpart M of this part.

(k) *Continuous Parameter Monitoring System (CPMS) Records for closed vent systems in vacuum service.* Keep records of the inspections, checks and

performance evaluations required by subpart J of this part for your CPMS.

§ 65.382 What information must I submit in my Notification of Compliance Status?

You must include the information listed in paragraphs (a) through (c) of this section, as applicable, in the Notification of Compliance Status that you submit according to the procedures in § 65.225.

(a) The identification of each storage vessel in the regulated source under the referencing subpart, its storage capacity and the liquid stored in the storage vessel.

(b) The identification of each transfer rack in the regulated source under the referencing subpart.

(c) If applicable, you must include rationale, pursuant to § 65.320(c)(3), explaining why pressure lower than 2.5 psig is sufficient to prevent breathing losses from pressure relief devices on storage vessels.

§ 65.384 What information must I submit in my semiannual periodic report?

Submit the information specified in paragraphs (a) through (f) of this section, as applicable, in semiannual periodic reports that you submit, as specified in § 65.225.

(a) If you do not empty or repair leaks before the end of the second extension period, as required by § 65.310(d) or § 65.315(d)(2), report the date when the storage vessel was emptied or repaired.

(b) Report the storage vessel identification and the start and end dates of each floating roof landing that does not meet the criteria specified in § 65.315(b)(1).

(c) If you obtain an instrument reading greater than 500 ppmv or an image of a leak when monitoring a pressure vessel in accordance with § 65.340(c)(1) or (2), submit a copy of the records specified in § 65.380(h)(2).

(d) If you use a closed vent system and non-flare control device, as specified in § 65.325, § 65.360(b)(1) or § 65.370(c)(2), submit information in semiannual reports, as specified in subparts J and M of this part. For flares, report any instances when visual emissions occur longer than 5 minutes during any 2 consecutive hours, a pilot flame is out, or the pilot flames are not monitored.

(e) If you use a vapor balancing system, as specified in § 65.320, § 65.360(b)(3) or § 65.370(c)(1), submit information in semiannual reports, as specified in subparts J and M of this part.

(f) If you use a fuel gas system, as specified in § 65.330 or § 65.360(b)(2), submit information in semiannual reports, as specified in subparts J and M of this part.

§ 65.386 What information must I submit in my annual periodic report?

You must report the information specified in paragraphs (a) through (c) of this section, as applicable, in annual periodic reports that you submit, as specified in § 65.225.

(a) *Inspection results.* You must submit a copy of the inspection record (required by § 65.380(c)(2), (d)(3) and (g)(1)) when an inspection failure or leak is detected.

(b) *Estimated emissions from floating roof landings.* Submit a copy of the estimated emissions record when a floating roof is landed, as specified in § 65.380(d)(1).

(c) *Estimated emissions from overfilling.* Submit a copy of the estimated emissions record when a storage vessel is overfilled, as specified in § 65.380(i).

§ 65.388 What other reports must I submit and when?

(a) *Notification of inspection.* (1) Except as specified in paragraphs (a)(2) and (3) of this section, you must notify the Administrator at least 30 days prior to a storage vessel inspection required by § 65.310(c) or § 65.315(c). This notification may be included in your next annual periodic report if the annual periodic report will be submitted so that it is received by the Administrator at least 30 days prior to the inspection.

(2) Except as specified in paragraph (a)(3) of this section, if an inspection is unplanned and you could not have known about the inspection 30 days in advance, then you must notify the Administrator at least 7 days before the inspection. Notification must be made by telephone immediately, followed by written documentation demonstrating why the inspection was unplanned. Alternatively, the notification, including the written documentation, may be made in writing and sent so that it is received by the Administrator at least 7 days before the inspection.

(3) A delegated state or local agency may waive the requirement for notification of storage vessel inspections.

(b) *Requests for alternate devices.* If you request the use of an alternate device, as described in § 65.315(e), you must submit an application in accordance with § 65.260.

Other Requirements and Information

§ 65.390 What definitions apply to this subpart?

All terms used in this subpart have the same meaning given in the Clean Air Act and subpart H of this part, unless otherwise specified in the referencing subpart.

List of Tables to Subpart I of Part 65

TABLE 1 TO SUBPART I OF PART 65—STANDARDS AND COMPLIANCE REQUIREMENTS FOR STORAGE VESSELS AND TRANSFER OPERATIONS

[As required in §§ 65.310, 65.315, 65.320, 65.325, 65.330, 65.360 and 65.370, you must comply with each applicable control requirement for storage vessels and transfer operations specified in the following table.]

For a(n) . . .	You must . . .
1. Atmospheric storage vessel that stores any regulated material and does not meet criteria specified in item 2 or item 3 to this table.	a. Comply with § 65.310 and the requirements referenced therein; or b. Comply with the requirements in item 2 to this table.
2. Atmospheric storage vessel ≥20,000 gal and <40,000 gal that stores material with a MTVP ≥1.9 psia.	a. Comply with § 65.315 and the requirements referenced therein, provided the MTVP of the stored liquid is less than 76.6 kPa; or b. Comply with § 65.320 and the requirements referenced therein; or c. Comply with § 65.325 and the requirements referenced therein; or d. Comply with § 65.330 and the requirements referenced therein.
3. Atmospheric storage vessel ≥40,000 gal that stores material with a MTVP ≥0.75 psia.	a. Comply with item 2 to this table.

TABLE 1 TO SUBPART I OF PART 65—STANDARDS AND COMPLIANCE REQUIREMENTS FOR STORAGE VESSELS AND TRANSFER OPERATIONS—Continued

[As required in §§ 65.310, 65.315, 65.320, 65.325, 65.330, 65.360 and 65.370, you must comply with each applicable control requirement for storage vessels and transfer operations specified in the following table.]

For a(n) . . .	You must . . .
4. Pressure vessels	a. Comply with § 65.340 and the requirements referenced therein.
5. Transfer operations that involve loading of transport vehicles	a. Comply with § 65.360 and the requirements referenced therein.
6. Transfer operations that involve loading of containers	a. Comply with § 65.370 and the requirements referenced therein.

TABLE 2 TO SUBPART I OF PART 65—INSPECTION AND MONITORING REQUIREMENTS AND SCHEDULE FOR STORAGE VESSELS EQUIPPED WITH AN IFR

[As required in § 65.315(c), you must inspect and monitor IFR, as specified in the following table.]

For each IFR, comply with . . .	You must . . .	At the following times . . .	Except . . .
1. Option 1; or	a. From within the storage vessel, inspect the floating roof deck, deck fittings and rim seal(s) in accordance with § 65.315(c)(1) and (2)(i); and	i. Before the initial fill of the storage vessel, and.	Not applicable.
		ii. Each time the storage vessel is completely emptied and degassed, or before the date 10 years after the previous inspection from within the storage vessel, whichever occurs first.	(1) If the storage vessel is out of service on the date 10 years after the previous inspection, the inspection may be delayed, provided it is conducted prior to filling the storage vessel with regulated material.
	b. From openings in the fixed roof or from within the storage vessel, visually inspect the floating roof deck, deck fittings and rim seal in accordance with § 65.315(c)(1).	i. At least annually	(1) Identification of holes or tears in the rim seal is required only for the seal that is visible from the top of the storage vessel. (2) This inspection is not required in a calendar year when you conduct an inspection in accordance with item 1.a of this table.
2. Option 2; or	a. From within the storage vessel, inspect the floating roof deck, deck fittings and rim seal(s) in accordance with § 65.315(c)(1); and	i. Before the initial fill of the storage vessel; and.	See item 2.b.i.(1) of this table.
		ii. Each time the storage vessel is completely emptied and degassed, or before the date 10 years after the previous inspection from within the storage vessel, whichever occurs first.	(1) If the storage vessel is out of service on the date 10 years after the previous inspection, the inspection may be delayed provided it is conducted prior to filling the storage vessel with regulated material.
	b. From openings in the fixed roof, monitor each deck fitting in accordance with § 65.315(c)(2)(iii); and	i. Within 90 days after initial fill; and	(1) This option may be used only if the criteria for optical gas imaging in § 65.315(c)(2)(iii) and 40 CFR part 60, appendix K are met.
		ii. At least annually	Not applicable.
	c. From openings in the fixed roof, monitor the circumference of the IFR in accordance with § 65.315(c)(6).	i. Within 90 days after initial fill; and	See item 2.b.i.(1) of this table.
		ii. At least annually	Not applicable.
3. Option 3	a. As an alternative to Option 1 in this table, for an IFR with two rim seals, inspect the roof deck, deck fittings, and rim seals from within the storage vessel in accordance with § 65.315(c)(1) and (2)(i).	i. Before the initial fill; and	Not applicable.
		ii. Each time the storage vessel is completely emptied and degassed, or before the date 5 years after the previous inspection from within the storage vessel, whichever occurs first.	(1) If the storage vessel is out of service on the date 5 years after the previous inspection, the inspection may be delayed provided it is conducted prior to filling the storage vessel with regulated material.

TABLE 3 TO SUBPART I OF PART 65—INSPECTION AND MONITORING REQUIREMENTS AND SCHEDULE FOR STORAGE VESSELS EQUIPPED WITH AN EFR

[As required in § 65.315(c), you must inspect and monitor EFR, as specified in the following table.]

For each EFR, comply with . . .	You must . . .	At the following times . . .	Except . . .
1. Option 1; or	a. Inspect the primary rim seal, as specified in § 65.315(c)(3), and	i. Within 90 days after the initial fill of the storage vessel, and	Not applicable.
		ii. Before the date 5 years after the previous primary seal gap inspection.	Not applicable.
	b. Inspect the secondary rim seal, as specified in § 65.315(c)(3), and	i. Within 90 days after the initial fill of the storage vessel, and	Not applicable.
		ii. At least annually.	Not applicable.
	c. Visually inspect the floating roof deck, deck fittings and secondary seal, as specified in § 65.315(c)(1); and	i. At least annually.	(1) Identification of holes or tears in the rim seal is required only for the seal that is visible from the top of the storage vessel.
	d. Inspect the deck fittings, as specified in § 65.315(c)(2)(i).	i. At least annually.	Not applicable.
2. Option 2	a. Monitor the circumference of the EFR in accordance with § 65.315(c)(5); and	i. Within 90 days after initial fill; and	Not applicable.
		ii. At least annually.	Not applicable.
	b. Monitor each deck fitting in accordance with § 65.315(c)(2)(ii); and	i. Within 90 days after initial fill; and	Not applicable.
		ii. At least annually.	Not applicable.
	c. Visually inspect the floating roof deck, deck fittings and secondary seal in accordance with § 65.315(c)(1).	i. At least annually.	(1) Identification of holes or tears in the rim seal is required only for the seal that is visible from the top of the storage vessel.
3. Option 3	a. Monitor the circumference of the EFR in accordance with § 65.315(c)(4); and	i. Within 90 days after initial fill; and	(1) This option may be used only if the criteria for optical gas imaging in § 65.315(c)(4) and 40 CFR part 60, appendix K are met.
		ii. At least annually.	Not applicable.
	b. Monitor each deck fitting in accordance with § 65.315(c)(2)(iii); and	i. Within 90 days after initial fill; and	(1) This option may be used only if the criteria for optical gas imaging in § 65.315(c)(2)(iii) and 40 CFR part 60, appendix K are met.
		ii. At least annually.	Not applicable.
	c. Visually inspect the floating roof deck, deck fittings and secondary seal in accordance with § 65.315(c)(1).	i. At least annually.	(1) Identification of holes or tears in the rim seal is required only for the seal that is visible from the top of the storage vessel.

4. Add subpart J to read as follows:

Sec.

Subpart J—National Uniform Emission Standards for Equipment Leaks

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Subpart J—National Uniform Emission Standards for Equipment Leaks

What This Subpart Covers

§ 65.400 What is the purpose of this subpart?

This subpart specifies requirements to meet the emission standards of a referencing subpart for equipment leaks.

§ 65.401 Am I subject to this subpart?

You are subject to this subpart if you are an owner or operator who is subject to a referencing subpart and you have been expressly directed to comply with this subpart by a referencing subpart.

§ 65.402 What parts of my plant does this subpart cover?

This subpart applies to equipment in process units, closed vent systems and fuel gas systems that contains or contacts regulated material and is subject to a referencing subpart. This subpart applies to valves, pumps, connectors, agitators, pressure relief devices, compressors, sampling connection systems, open-ended valves and lines, instrumentation systems and any other equipment, as defined in the referencing subpart. This subpart also applies to closed-purge and closed-loop systems used to meet the requirements of this subpart.

§ 65.403 What parts of the General Provisions apply to me?

The General Provisions of 40 CFR parts 60, 61 and 63 apply to this subpart, as specified in subpart H of this part.

Emission Limits and Other Standards—General

§ 65.410 What are my compliance options?

(a) Except as specified in paragraphs (b) and (c) of this section, for each regulated source that is subject to control requirements for equipment leaks in a referencing subpart, you must comply with paragraphs (a)(1) through (3) of this section.

(1) Identify subject equipment in accordance with §§ 65.415 and 65.416.

(2) Comply with the requirements in paragraph (a)(2)(i) of this section or, as applicable, comply with the alternative specified in paragraph (a)(2)(ii) of this section.

(i) As applicable, comply with the equipment-specific standards in §§ 65.420 through 65.429 and the related requirements in §§ 65.430 through 65.432.

(ii) As an alternative to paragraph (a)(2)(i) of this section, if you have equipment in a batch operation, you may elect to comply with the alternative monitoring frequency requirements in § 65.440.

(3) Comply with the applicable notification, reporting and recordkeeping requirements in §§ 65.470 and 65.475.

(b) You are not required to comply with the requirements of §§ 65.420 through 65.440 for equipment in vacuum service, provided that you comply with paragraphs (b)(1) through (3) of this section.

(1) Identify the equipment, as specified in § 65.415(f).

(2) Continuously demonstrate that the equipment remains in vacuum service, as described in § 65.416(e).

(3) Comply with the applicable recordkeeping requirements in § 65.475(b)(6).

(c) If your referencing subpart specifies that you may comply with the optical gas imaging requirements in § 65.450 as an alternative to complying with paragraph (a) of this section, you must comply with paragraphs (c)(1) through (3) of this section if you elect to comply with the optical gas imaging alternative.

(1) Identify subject equipment in accordance with § 65.415.

(2) Comply with § 65.450 for leak detection and repair.

(3) Comply with the applicable notification, reporting and recordkeeping requirements in §§ 65.470 and 65.475(e).

§ 65.413 What are the standards and compliance requirements for closed vent systems, control devices and fuel gas systems used to comply with this subpart?

A closed vent system and non-flare control device or a fuel gas system used to meet applicable requirements in §§ 65.420 through 65.427 must meet the applicable requirements of subpart M of this part. A flare used to meet applicable requirements in §§ 65.420 through 65.427 must meet the applicable requirements in § 63.11(b) of this chapter. You must not use a flare to control halogenated vent streams, as defined in § 65.295. The non-flare control device must also meet the requirements of paragraphs (a) and (b) of this section.

(a) A non-flare control device must reduce regulated material emissions by at least 95 percent by weight or to an outlet concentration less than 20 ppmv.

(b) To demonstrate initial compliance with the emission limit specified in paragraph (a) of this section, you must conduct either a design evaluation or a performance test in accordance with subpart M of this part.

§ 65.415 How must I identify equipment?

You must identify equipment subject to this subpart, as described in paragraphs (a) through (g) of this section. Identification of the equipment does not require physical tagging of the equipment. For example, the equipment may be identified on a plant site plan, in log entries, by designation of process unit boundaries, by some form of weatherproof identification or by other appropriate methods.

(a) *Connectors.* Except for inaccessible, ceramic or ceramic-lined connectors meeting the provision of § 65.422(d)(3) and connectors in instrumentation systems identified, pursuant to paragraph (d) of this section, identify the connectors subject to the requirements of this subpart. You need not individually identify each connector if you identify all connectors in a designated area or length of pipe subject to the provisions of this subpart as a group and you indicate the number of connectors subject. The identification of connectors must be complete no later than either the compliance date, as specified in your referencing subpart, or before completion of the initial round of monitoring required by § 65.422(a)(2), whichever is later.

(b) *Pressure relief devices.* Identify the pressure relief devices in gas or vapor service that vent to the atmosphere under the provisions of § 65.424(a) and the pressure relief devices in gas or vapor service routed through a closed

vent system to a control device under the provisions of § 65.424(d).

(c) *Instrumentation systems.* Identify instrumentation systems subject to the provisions of § 65.430(a). You do not need to identify individual valves, pumps, connectors or other pieces of equipment within an instrumentation system.

(d) *Equipment in heavy liquid service.* Identify the equipment in heavy liquid service, under the provisions of § 65.430(c).

(e) *Equipment in service less than 300 hours per calendar year.* Identify, either by list, location (area or group) or other method, equipment in regulated material service less than 300 hours per calendar year within a process unit subject to the provisions of this subpart.

(f) *Equipment in vacuum service.* Identify, either by list, location (area or group) or other method, equipment in vacuum service within a process unit subject to the provisions of this subpart.

(g) *Other equipment.* Identify any other equipment subject to any of the provisions in § 65.410.

§ 65.416 How do I designate special equipment?

(a) *Equipment that is unsafe- or difficult-to-monitor. (1) Designation and criteria for unsafe-to-monitor.* You may designate the equipment listed in paragraphs (a)(1)(i) though (iv) of this section as unsafe-to-monitor if you determine that monitoring personnel would be exposed to an immediate danger as a consequence of complying with the monitoring requirements of this subpart. Examples of unsafe-to-monitor equipment include, but are not limited to, equipment under extreme pressure or heat, equipment that you cannot access without the use of a motorized man-lift basket in areas where an ignition potential exists or equipment in near proximity to hazards such as electrical lines.

(i) Valves complying with § 65.420 or § 65.440.

(ii) Pumps complying with § 65.421 or § 65.440.

(iii) Connectors complying with § 65.422 or § 65.440.

(iv) Agitators complying with § 65.423 or § 65.440.

(2) *Designation and criteria for difficult-to-monitor.* You may designate the equipment listed in (a)(2)(i) though (iv) as difficult-to-monitor if you determine that the equipment cannot be monitored without elevating the monitoring personnel more than 7 feet above a support surface or it is not accessible in a safe manner when it is in regulated material service.

(i) Valves complying with § 65.420 or § 65.440. In a new source, the number of valves you designate as difficult-to-monitor must be less than 3 percent of the total number of valves in that new source, unless all of the difficult-to-monitor valves in that source are low leak technology, as described in § 65.432(e)(3).

(ii) Pumps complying with § 65.421 or § 65.440.

(iii) Connectors complying with § 65.422 or § 65.440.

(iv) Agitators complying with § 65.423 or § 65.440.

(3) *Identification of unsafe- or difficult-to-monitor equipment.* You must record the identity of equipment designated as unsafe-to-monitor according to the provisions of paragraph (a)(1) of this section and record the identity of equipment designated as difficult-to-monitor according to the provisions of paragraph (a)(2) of this section. For both types of equipment, you must also record the planned schedule for monitoring this equipment and an explanation why the equipment is unsafe- or difficult-to-monitor, as specified in § 65.475(b)(2)(ii).

(4) *Written plan requirements.* For equipment designated as unsafe-to-monitor or difficult-to-monitor, you must have a written plan that meets the requirements of paragraph (a)(4)(i) or (ii) of this section, as applicable. You must keep the plan onsite as long as the equipment is designated unsafe-to-monitor or difficult-to-monitor.

(i) For equipment designated as unsafe-to-monitor according to the provisions of paragraph (a)(1) of this section, you must have a written plan that requires monitoring of the equipment as frequently as practical during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in § 65.432 if a leak is detected. If applicable, your written plan must also address how you will address any indications of liquids dripping observed during a weekly visual inspection.

(ii) For equipment designated as difficult-to-monitor according to the provisions of paragraph (a)(2) of this section, you must have a written plan that requires monitoring of the equipment at least once per calendar year and repair of the equipment according to the procedures in § 65.432 if a leak is detected. If applicable, your written plan must also address how you will address any indications of liquids dripping observed during a weekly visual inspection.

(b) *Inaccessible connectors.* You may designate a connector as an inaccessible connector if it meets any of the provisions specified in paragraphs (b)(1) through (3) of this section, as applicable.

(1) The connector is buried.

(2) The connector is insulated in a manner that prevents access to the connector by a monitor probe.

(3) The connector is obstructed by equipment or piping that prevents access to the connector by a monitor probe.

(c) *Compressors operating with an instrument reading of less than 500 parts per million (ppm) above background.* Identify the compressors that you elect to designate as operating with instrument reading of less than 500 parts per million (ppm) above background under the provisions of § 65.425(b).

(d) *Pressure relief devices (PRD) in regulated material service that vent to atmosphere.* If your referencing subpart specifies that releases to the atmosphere from a pressure relief device (PRD) is not allowed, identify all PRD in regulated material service, the process components served by the PRD and whether the PRD vent to atmosphere or through a closed vent system to a control device. This identification may be used to meet the requirements of § 65.415(b).

(e) *Equipment in vacuum service.* For equipment in vacuum service that contains or contacts regulated material, you must demonstrate that the equipment is operated and maintained in vacuum service, as described in paragraphs (e)(1) through (3) of this section.

(1) *In vacuum service alarm.* You must install a continuous parameter monitoring system (CPMS) to measure pressure and an alarm system that will alert an operator immediately and automatically when the pressure is such that the equipment no longer meets the definition of in vacuum service. The alarm must be located such that the alert is detected and recognized easily by an operator. For the CPMS, you must check for obstructions (e.g., pressure tap pluggage) at least once each process operating day. You must conduct a performance evaluation annually, a check of all mechanical connections for leakage monthly and a visual inspection of all components for integrity, oxidation and galvanic corrosion every 3 months.

(2) *In vacuum service alarm procedures.* If the alarm is triggered for equipment operating in vacuum service, as specified in paragraph (e)(1) of this section, you must immediately initiate procedures to get the equipment back into vacuum service, or you may chose to comply with the requirements of § 65.410(a)(2).

(3) In vacuum service alarm records. You must maintain records, as specified in § 65.475(b)(6).

Equipment Leak Standards

§ 65.420 What are the standards and compliance requirements for valves in gas and vapor service and valves in light liquid service?

Except as provided in paragraph (d) of this section, you must comply with the requirements specified in paragraphs (a) through (c) of this section for valves in gas and vapor service and valves in light liquid service.

(a) *Instrument monitoring and leak detection.* You must conduct instrument monitoring, as specified in § 65.431 and paragraphs (a)(1) through (3) of this section.

(1) *Instrument reading that defines a leak.* The instrument reading that defines a leak is 500 ppm or greater.

(2) *Monitoring frequency.* Except as specified in paragraph (a)(2)(vi) of this section, you must monitor valves for leaks monthly for the first 2 months after initial startup. After the first 2 months following initial startup, you must monitor valves for leaks at the frequency specified in paragraphs (a)(2)(i) through (v) of this section. You must also keep a record of the start date and end date of each monitoring period under this section for each process unit, as specified in § 65.475(c)(1)(i).

(i) At process units with at least 2-percent leaking valves, calculated according to paragraph (b) of this section, you must monitor each valve according to either paragraph (a)(2)(i)(A) or (B) of this section.

(A) Monitor each valve monthly.

(B) If the summed number of valves found to be leaking (*i.e.,* ''V_L'' in Equation 2 in paragraph (b)(1)(ii) of this section) over the last two monitoring periods is three or less, you may elect to monitor each valve quarterly.

(ii) At process units with less than 2-percent leaking valves, calculated as specified in paragraph (b) of this section, you must monitor each valve quarterly, except as provided in paragraphs (a)(2)(iii) through (v) of this section.

(iii) At process units with less than 1-percent leaking valves, you may elect to monitor each valve semiannually.

(iv) At process units with less than 0.5-percent leaking valves, you may elect to monitor each valve annually.

(v) At process units with less than 0.25 percent leaking valves, you may elect to monitor each valve biennially.

(vi) Monitoring data generated before the regulated source became subject to the referencing subpart and meeting the criteria of either § 65.431(a)(1) through (5), or § 65.431(a)(6), may be used to qualify initially for less frequent monitoring under paragraphs (a)(2)(ii) through (v) of this section.

(3) *Valve subgrouping.* For a process unit or a group of process units to which this subpart applies, you may choose to subdivide the valves in the applicable process unit or group of process units and apply the provisions of paragraph (b)(2) of this section to each subgroup. If you elect to subdivide the valves in the applicable process unit or group of process units, then the provisions of paragraphs (a)(3)(i) through (vii) of this section apply.

(i) The overall performance of total valves in the applicable process unit or group of process units to be subdivided must be less than 2-percent leaking valves, as detected according to paragraphs (a)(1) and (2) of this section and, as calculated according to paragraphs (b)(1)(ii) and (b)(2) of this section.

(ii) The initial assignment or subsequent reassignment of valves to subgroups shall be governed by the provisions of paragraphs (a)(3)(ii)(A) through (C) of this section.

(A) You must determine which valves are assigned to each subgroup. Valves with less than 1 year of monitoring data or valves not monitored within the last 12 months must be placed initially into the most frequently monitored subgroup until at least 1 year of monitoring data have been obtained.

(B) Any valve or group of valves can be reassigned from a less frequently monitored subgroup to a more frequently monitored subgroup provided that you monitored the valves to be reassigned during the most recent monitoring period for the less frequently monitored subgroup. The monitoring results must be included with that less frequently monitored subgroup's associated percent leaking valves calculation for that monitoring event.

(C) Any valve or group of valves can be reassigned from a more frequently monitored subgroup to a less frequently monitored subgroup provided that the valves to be reassigned have not leaked for the period of the less frequently monitored subgroup (*e.g.,* for the last 12 months, if the valve or group of valves is to be reassigned to a subgroup being monitored annually). Non-repairable valves may not be reassigned to a less frequently monitored subgroup.

(iii) Every 6 months, you must determine if the overall performance of total valves in the applicable process unit or group of process units is less than 2-percent leaking valves and so indicate the performance in the next periodic report. You must calculate the overall performance of total valves in the applicable process unit or group of process units as a weighted average of the percent leaking valves of each subgroup according to Equation 1 of this section:

$$\%V_{LO} = \frac{\sum_{i=1}^{n} \left(\%V_{Li} \times V_i\right)}{\sum_{i=1}^{n} V_i} \qquad \text{(Eq. 1)}$$

Where:

$\%V_{LO}$ = Overall performance of total valves in the applicable process unit or group of process units.

$\%V_{Li}$ = Percent leaking valves in subgroup i, most recent value calculated according to the procedures in paragraphs (b)(1)(ii) and (b)(2) of this section.

V_i = Number of valves in subgroup i.

n = Number of subgroups.

(iv) If the overall performance of total valves in the applicable process unit or group of process units, determined according to paragraph (a)(3)(iii) of this section, is 2-percent leaking valves or greater, you may no longer subgroup and must revert to the program required in paragraphs (a)(1) and (2) of this section for that applicable process unit or group of process units. You can again elect to comply with the valve subgrouping procedures of paragraph (a)(3) of this section if future overall performance of total valves in the process unit or group of process units is again less than 2 percent.

(v) You must maintain the records specified in § 65.475(c)(1)(ii).

(vi) To determine the monitoring frequency for each subgroup, use the

calculation procedures of paragraph (b)(2) of this section.

(vii) Except for the overall performance calculations required by paragraphs (a)(3)(i) and (iii) of this section, each subgroup must be treated as if it were a process unit for the purposes of applying the provisions of this section.

(b) *Percent leaking valves calculation.* You must calculate the percent leaking valves in accordance with paragraphs (b)(1) through (3) of this section.

(1) *Calculation basis and procedures.* (i) You must decide no later than the compliance date specified in the referencing subpart or upon revision of an operating permit whether to calculate percent leaking valves on a process unit or group of process units basis. Once you have decided, all subsequent percentage calculations must be made on the same basis, and this also must be the basis used for comparison with the subgrouping criteria specified in paragraph (a)(3)(i) of this section.

(ii) Calculate the percent leaking valves for each monitoring period for each process unit or valve subgroup, as provided in paragraph (a)(3) of this section, using Equation 2 of this section:

$$\%V_L = (V_L / V_T) \times 100 \qquad \text{(Eq. 2)}$$

Where:

$\%V_L$ = Percent leaking valves.

V_L = Number of valves found leaking, as determined through periodic monitoring, as required in paragraph (a) of this section, including those valves found leaking, pursuant to paragraphs (c)(2)(iii)(A) and (B) of this section and excluding non-repairable valves, as provided in paragraph (b)(3) of this section.

V_T = The total number of valves monitored.

(2) *Calculation for monitoring frequency.* When determining the next monitoring frequency for each process unit or valve subgroup currently subject to monthly, quarterly or semiannual monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last two monitoring periods. When determining the next monitoring frequency for each process unit or valve subgroup currently subject to annual or biennial monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last three monitoring periods.

(3) *Non-repairable valves.* You must include non-repairable valves in the calculation of percent leaking valves, as specified in paragraphs (b)(3)(i) and (ii) of this section.

(i) You must include a non-repairable valve in the calculation of percent leaking valves the first time the valve is identified as leaking and non-repairable.

(ii) You may exclude a number of non-repairable valves (identified and included in the percent leaking valves calculation in a previous period, as required in paragraph (b)(3)(i)) up to a maximum of 1 percent of the total number of valves in regulated material service at a process unit. If the number of non-repairable valves exceeds 1 percent of the total number of valves in regulated material service at a process unit, you must include the number of non-repairable valves exceeding 1 percent of the total number of valves in regulated material service in the calculation of percent leaking valves.

(c) *Leak repair.* (1) If a leak is determined, pursuant to paragraph (a) of this section, then you must repair the leak using the procedures in § 65.432, as applicable.

(2) After a leak has been repaired, you must monitor the valve at least once within the first 3 months after its repair. The monitoring required by this paragraph is in addition to the monitoring required to satisfy the definitions of repair and first attempt at repair.

(i) You must conduct monitoring, as specified in § 65.431(a) and determine whether the valve has resumed leaking, as specified in § 65.431(b).

(ii) If the timing of the monitoring required by paragraph (a) of this section coincides with the timing of the monitoring specified in this paragraph, you may use the monitoring required by paragraph (a) of this section to satisfy the requirements of this paragraph. Alternatively, you may perform other monitoring to satisfy the requirements of this paragraph, regardless of whether the timing of the monitoring period for periodic monitoring coincides with the time specified in this paragraph.

(iii) If a leak is detected by monitoring that is conducted, pursuant to paragraph (c)(2) of this section, you must follow the provisions of paragraphs (c)(2)(iii)(A) and (B) of this section to determine whether that valve must be counted as a leaking valve for purposes of paragraph (b)(1)(ii) of this section.

(A) If you elected to use periodic monitoring required by paragraph (a) of this section to satisfy the requirements of paragraph (c)(2) of this section, then you must count the valve as a leaking valve.

(B) If you elected to use other monitoring, prior to the periodic monitoring required by paragraph (a) of this section, to satisfy the requirements of paragraph (c)(2) of this section, then you must count the valve as a leaking valve unless it is repaired and shown by periodic monitoring not to be leaking.

(d) *Special provisions for valves.* (1) *Fewer than 250 valves.* Any valve located at a plant site with fewer than 250 valves in regulated material service is exempt from the requirements for monthly monitoring specified in paragraph (a)(2)(i) of this section. Instead, you must monitor each valve in regulated material service for leaks quarterly or comply with paragraph (a)(2)(iii), (iv) or (v) of this section, except as provided in paragraphs (d)(1) and (2) of this section.

(2) *No stem or packing gland.* Any valve that is designed with a valve mechanism that is not connected to a device that penetrates the valve housing (*e.g.,* a check valve) is exempt from the requirements of paragraphs (a) through (c) of this section. You must instead conduct sensory monitoring according to § 65.430.

(3) *Unsafe-to-monitor valves.* Any valve that you designate, in accordance with § 65.416(a)(1), as an unsafe-to-monitor valve is exempt from paragraphs (a) through (c) of this section. You must monitor and repair the valve according to the written plan specified in § 65.416(a)(4)(i).

(4) *Difficult-to-monitor valves.* Any valve that you designate, in accordance with § 65.416(a)(2) as a difficult-to-monitor valve is exempt from the requirements of paragraphs (a) through (c) of this section. You must monitor and repair the valve according to the written plan specified in § 65.416(a)(4)(ii).

§ 65.421 What are the standards and compliance requirements for pumps in light liquid service?

Except as specified in paragraph (d) of this section, you must comply with the requirements specified in paragraphs (a) through (c) of this section for pumps in light liquid service.

(a) *Instrument monitoring and leak detection.* You must conduct instrument

monitoring, as specified in § 65.431 and paragraphs (a)(1) and (2) of this section.

(1) *Instrument reading that defines a leak.* The instrument reading that defines a leak is specified in paragraphs (a)(1)(i) and (ii) of this section.

(i) 5,000 ppm or greater for pumps handling polymerizing monomers.

(ii) 2,000 ppm or greater for all other pumps.

(2) *Monitoring frequency.* You must monitor the pumps monthly to detect leaks. For a pump that begins operation after the initial startup date for the process unit, monitor within 30 days after the end of the pump startup period, unless the pump is replacing a leaking pump or if the pump meets any of the specifications in paragraph (d) of this section.

(b) *Leak repair.* If a leak is detected, pursuant to paragraph (a) of this section, then you must repair the leak using the procedures in § 65.432, as applicable.

(c) *Visual inspection.* (1) You must check each pump by visual inspection each calendar week for indications of liquids dripping from the pump seal.

(2) If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, you must follow the procedure specified in either paragraph (c)(2)(i) or (ii) (if applicable) of this section prior to the next required inspection, except as specified in paragraph (c)(2)(iii) of this section.

(i) Before the next weekly inspection, you must repair the pump seal, as defined in § 65.295 for indications of liquids dripping.

(ii) You must monitor the pump, as specified in § 65.431(a).

(A) If the instrument reading indicates a leak, as specified in § 65.431(b) and paragraph (a)(1) of this section, a leak is detected, and you must repair it using the procedures in § 65.432.

(B) If the instrument reading does not indicate a leak, as specified in § 65.431(b) and paragraph (a)(1) of this section, then a leak is not detected and no repair is required.

(iii) If you observed liquids dripping during the last weekly inspection and the characteristics of the liquids dripping have not changed since that last weekly inspection (*e.g.,* frequency of drips, different color, different odor), then you are not required to comply with paragraph (c)(2)(i) or (ii) of this section prior to the next weekly inspection.

(3) You must document each inspection, as specified in § 65.475(c)(2)(i). If you comply with paragraph (c)(2)(iii) of this section, the record must include a description of the characteristics of the liquids dripping.

(d) *Special provisions for pumps.*

(1) *Dual mechanical seal pumps.* Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (a) of this section, provided you meet the requirements specified in paragraphs (d)(1)(i) through (viii) of this section.

(i) Each dual mechanical seal system meets the requirements specified in paragraph (d)(1)(i)(A), (B) or (C) of this section.

(A) The seal system is operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure.

(B) The seal system is equipped with a barrier fluid degassing reservoir that is connected by a closed vent system to a control device or is routed to a fuel gas system. The closed vent system and control device or the fuel gas system must meet § 65.413.

(C) The seal system is equipped with a closed-loop system that purges the barrier fluid into a process stream.

(ii) The barrier fluid is not in light liquid service.

(iii) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system or both.

(iv) Unless the pump is located within the boundary of an unmanned plant site, each sensor described in paragraph (d)(1)(iii) of this section is observed daily or is equipped with an alarm.

(v) Each pump is checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. You must document each inspection, as specified in § 65.475(c)(2)(ii). If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, you must follow the procedure specified in paragraph (d)(1)(v)(A) or (B) of this section prior to the next required inspection.

(A) Before the next weekly inspection, you must repair the pump seal, as defined in § 65.295 for indications of liquids dripping.

(B) You must monitor the pump, as specified in § 65.431(a) and determine if there is a leak of regulated material in the barrier fluid, as specified in § 65.431(b). If an instrument reading of 2,000 ppm or greater is measured, a leak is detected.

(vi) You must determine, based on design considerations and operating experience, criteria applicable to the presence and frequency of drips and to the sensor that indicate failure of the seal system, the barrier fluid system or both. You must keep records of the design criteria, as specified in § 65.475(c)(2)(iii).

(vii) If indications of liquids dripping from the pump seal exceed the criteria established in paragraph (d)(1)(vi) of this section, or if, based on the criteria established in paragraph (d)(1)(vi) of this section, the sensor indicates failure of the seal system, the barrier fluid system or both, a leak is detected.

(viii) When you detect a leak, pursuant to paragraph (d)(1)(v)(B) or (d)(1)(vii) of this section, you must repair it, as specified in § 65.432.

(2) *No external shaft.* Any pump that is designed with no externally actuated shaft penetrating the pump housing is exempt from the requirements of paragraph (a) of this section.

(3) *Unmanned plant site.* Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (c) and (d)(1)(v) of this section, and the daily requirements of paragraph (d)(1)(iv) of this section, provided that each pump is visually inspected as often as practical and at least monthly.

(4) *Unsafe-to-monitor pumps.* Any pump that you designate, in accordance with § 65.416(a)(1), as an unsafe-to-monitor pump, is exempt from the requirements of paragraphs (a) through (c) of this section. You must monitor, inspect and repair the pump according to the written plan specified in § 65.416(a)(4)(i).

(5) *Difficult-to-monitor pumps.* Any pump that you designate, in accordance with § 65.416(a)(2), as a difficult-to-monitor pump is exempt from the requirements of paragraphs (a) through (c) of this section. You must monitor, inspect and repair the pump according to the written plan specified in § 65.416(a)(4)(ii).

§ 65.422 What are the standards and compliance requirements for connectors in gas and vapor service and connectors in light liquid service?

If required by your referencing subpart, you must comply with the requirements specified in paragraphs (a) through (c) of this section for connectors in gas and vapor service and connectors in light liquid service except as provided in paragraph (d) of this section.

(a) *Instrument monitoring and leak detection.* You must conduct instrument monitoring, as specified in § 65.431 and paragraphs (a)(1) and (2) of this section.

(1) *Instrument reading that defines a leak.* The instrument reading that defines a leak is 500 ppm or greater.

(2) *Initial monitoring.* You must monitor all connectors in the process unit initially for leaks by the later of either 12 months after the compliance

date specified in a referencing subpart or 12 months after initial startup. If all connectors in the process unit have been monitored for leaks, meeting the criteria of either § 65.431(a)(1) through (5) or § 65.431(a)(6) prior to the compliance date specified in the referencing subpart, no initial monitoring is required, provided either no process changes have been made since the monitoring or you can show that the results of the monitoring, with or without adjustments, reliably demonstrate compliance despite process changes. If required to monitor because of a process change, you are required to monitor only those connectors involved in the process change.

(3) *Monitoring frequency.* After the initial monitoring (or monitoring conducted before the regulated source became subject to the referencing subpart) required in paragraph (a)(2) of this section, you must monitor connectors for leaks at the frequency specified in paragraphs (a)(3)(i) through (iii) of this section, depending on the result of the percent-leaking-connectors calculation specified in paragraph (b) of this section. You must also keep a record of the start date and end date of each monitoring period under this section for each process unit, as specified in § 65.475(c)(3)(i).

(i) If the percent leaking connectors in the process unit was greater than or equal to 0.5 percent, then you must monitor annually.

(ii) If the percent leaking connectors in the process unit was greater than or equal to 0.25 percent, but less than 0.5 percent, then monitor within 4 years. You are not required to monitor all connectors at the same time in the 4-year period, but you must separate monitoring of an individual connector by at least 2 years.

(iii) If the percent leaking connectors in the process unit was less than 0.25 percent, then monitor, as provided in paragraph (a)(3)(iii)(A) of this section and either paragraph (a)(3)(iii)(B) or (C) of this section, as appropriate.

(A) You must monitor at least 50 percent of the connectors within 4 years of the start of the monitoring period.

(B) If the percent-leaking-connectors calculated from the monitoring results in paragraph (a)(3)(iii)(A) of this section is greater than or equal to 0.35 percent of the monitored connectors, you must monitor all connectors that have not yet been monitored during that monitoring period as soon as practical, but within the next 6 months. At the conclusion of monitoring, a new monitoring period shall be started, pursuant to paragraph (a)(3) of this section, based on the percent leaking connectors of the total monitored connectors.

(C) If the percent leaking connectors calculated from the monitoring results in paragraph (a)(3)(iii)(A) of this section is less than 0.35 percent of the monitored connectors, you must monitor all connectors that have not yet been monitored within 8 years of the start of the monitoring period.

(b) *Percent leaking connectors calculation.* You must calculate the percent leaking connectors using Equation 3 of this section:

$$\%C_L = \left(C_L / C_T\right) \times 100 \qquad \text{(Eq. 3)}$$

Where:

$\%C_L$ = Percent leaking connectors.

C_L = Number of connectors found leaking during the monitoring period, as determined through periodic monitoring required in paragraph (a)(2) or (3) of this section.

C_T = Total number of connectors monitored.

(c) *Leak repair.* (1) If a leak is determined, pursuant to paragraph (a) of this section, then you must repair the leak using the procedures in § 65.432, as applicable.

(2) After a leak has been repaired, you must monitor the connector, as specified in § 65.431(a), once within the first 90 days after its repair to confirm that it is not leaking. The monitoring required by this paragraph is in addition to the monitoring required to satisfy the definitions of repair and first attempt at repair.

(d) *Special provisions for connectors.* (1) *Unsafe-to-monitor connectors.* Any connector that you designate, in accordance with § 65.416(a)(1), as an unsafe-to-monitor connector is exempt from the requirements of paragraphs (a) through (c) of this section. You must monitor and repair the connector according to the written plan specified in § 65.416(a)(4)(i).

(2) *Difficult-to-monitor connectors.* Any connector that you designate, in accordance with § 65.416(a)(2), as a difficult-to-monitor connector is exempt from the requirements of paragraphs (a) through (c) of this section. You must monitor, inspect and repair the connector according to the written plan specified in § 65.416(a)(4)(ii).

(3) *Inaccessible, ceramic or ceramic-lined connectors.* (i) Any connector that meets the provisions of paragraph (d)(3)(i)(A) or (B) of this section is exempt from the requirements of paragraphs (a) through (c) of this section and from the reporting and recordkeeping requirements of §§ 65.470 and 65.475.

(A) Any connector you designate, in accordance with § 65.416(b), as an inaccessible connector.

(B) Any connector that is ceramic or ceramic-lined (*e.g.,* porcelain, glass or glass-lined).

(ii) If you observe indications of a potential leak from any connector identified in paragraph (d)(2)(i) of this section by visual, audible, olfactory or other means, you must eliminate the visual, audible, olfactory or other indications of a potential leak to the atmosphere as soon as practical, but no later than the end of the next process unit shutdown or 5 years after detection, whichever is sooner.

§ 65.423 What are the standards and compliance requirements for agitators in gas and vapor service and agitators in light liquid service?

Except as provided in paragraph (d) of this section, you must comply with the requirements specified in paragraphs (a) through (c) of this section for agitators in gas and vapor service and agitators in light liquid service.

(a) *Instrument monitoring and leak detection.* You must conduct instrument monitoring, as specified in § 65.431 and paragraphs (a)(1) and (2) of this section.

(1) *Instrument reading that defines a leak.* The instrument reading that defines a leak is 10,000 ppm or greater.

(2) *Monitoring frequency.* You must monitor each agitator seal monthly to detect leaks.

(b) *Leak repair.* If a leak is detected, then you must repair the leak using the procedures in § 65.432, as applicable.

(c) *Visual inspection.* You must check each agitator seal by visual inspection each calendar week for indications of liquids dripping from the agitator seal. You must document each inspection, as specified in § 65.475(c)(4)(i). If there are indications of liquids dripping from the agitator seal at the time of the weekly inspection, you must follow the procedures specified in paragraph (c)(1) or (2) of this section prior to the next required inspection.

(1) Before the next weekly inspection, you must repair the agitator seal, as defined in § 65.295 for indications of liquids dripping.

(2) You must monitor the agitator seal, as specified in § 65.431(a). If an instrument reading of 10,000 ppm or greater is measured, as specified in § 65.431(b), a leak is detected, and you must repair it according to paragraph (b) of this section.

(d) *Special provisions for agitators.* (1) *Dual mechanical seal agitators.* Each agitator equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (a) of this section, provided you meet the requirements specified in paragraphs (d)(1)(i) through (vi) of this section.

(i) Each dual mechanical seal system meets the requirements specified in paragraph (d)(1)(i)(A), (B) or (C) of this section.

(A) The seal system is operated with the barrier fluid at a pressure that is, at all times greater than the agitator stuffing box pressure.

(B) The seal system is equipped with a barrier fluid degassing reservoir that is connected by a closed vent system to a control device or is routed to a fuel gas system. The closed vent system and control device or the fuel gas system must meet § 65.413.

(C) The seal system is equipped with a closed-loop system that purges the barrier fluid into a process stream.

(ii) The barrier fluid is not in light liquid service.

(iii) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system or both.

(iv) Unless the agitator seal is located within the boundary of an unmanned plant site, each sensor described in paragraph (d)(1)(iii) of this section is observed daily or is equipped with an alarm.

(v) Each agitator seal is checked by visual inspection each calendar week for indications of liquids dripping from the agitator seal. You must document each inspection, as specified in § 65.475(c)(4)(ii). If there are indications of liquids dripping from the agitator seal at the time of the weekly inspection, you must follow the procedure specified in paragraph (d)(1)(v)(A) or (B) of this section prior to the next required inspection.

(A) Before the next weekly inspection, you must repair the agitator seal, as defined in § 65.295 for indications of liquids dripping.

(B) You must monitor the agitator seal, as specified in § 65.431(a) and determine if there is a leak of regulated material in the barrier fluid, as specified in § 65.431(b). If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(vi) You must determine, based on design considerations and operating experience, criteria applicable to the presence and frequency of drips and to the sensor that indicate failure of the seal system, the barrier fluid system or both. You must keep records of the design criteria, as specified in § 65.475(c)(4)(iii).

(vii) If indications of liquids dripping from the agitator seal exceed the criteria established in paragraph (d)(1)(vi) of this section, or if, based on the criteria established in paragraph (d)(1)(vi) of this section, the sensor indicates failure of the seal system, the barrier fluid system or both, a leak is detected.

(viii) When you detect a leak, pursuant to paragraph (d)(1)(v)(B) or (d)(1)(vii) of this section, you must repair it, as specified in § 65.432.

(2) *No external shaft.* Any agitator that is designed with no externally actuated shaft penetrating the agitator housing is exempt from paragraph (a) of this section.

(3) *Unmanned plant site.* Any agitator that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (c) and (d)(1)(v) of this section, and the daily requirements of paragraph (d)(1)(iv) of this section, provided that each agitator is visually inspected as often as practical and at least monthly.

(4) *Equipment obstructions.* Any agitator seal that is obstructed by equipment or piping that prevents access to the agitator by a monitor probe is exempt from the monitoring requirements of paragraph (a) of this section. You must instead conduct sensory monitoring, as described in § 65.430.

(5) *Unsafe-to-monitor agitator seals.* Any agitator seal that you designate, in accordance with § 65.416(a)(1), as an unsafe-to-monitor agitator seal is exempt from the requirements of paragraphs (a) through (c) of this section. You must monitor, inspect and repair the agitator seal according to the written plan specified in § 65.416(a)(4)(i).

(6) *Difficult-to-monitor agitator seals.* Any agitator seal that you designate, in accordance with § 65.416(a)(2), as a difficult-to-monitor agitator seal is exempt from the requirements of paragraphs (a) through (c) of this section. You must monitor, inspect and repair the agitator seal according to the written plan specified in § 65.416(a)(4)(ii).

§ 65.424 What are the standards and compliance requirements for pressure relief devices?

Except as specified in paragraph (d), you must comply with the requirements specified in paragraphs (a) and (b) of this section for PRD in gas and vapor service. If your referencing subpart specifies that releases to the atmosphere from PRD in regulated material service are not allowed, you must comply with the requirements specified in paragraph (c) or (d) of this section for all PRD in regulated material service.

(a) Operating requirements. Operate each PRD in gas or vapor service with an instrument reading of less than 500 ppm above background.

(b) Release requirements. If a PRD in gas or vapor service vents or releases to atmosphere, you must comply with either paragraph (b)(1) or (2) of this section following the release.

(1) If the PRD does not consist of or include a rupture disk, conduct instrument monitoring, as specified in § 65.431 no later than 5 calendar days after the PRD returns to regulated material service following a pressure release to verify that the PRD is operating with an instrument reading of less than 500 ppm. An instrument reading of 500 ppm or greater is a deviation.

(2) If the PRD consists of or includes a rupture disk, install a replacement disk as soon as practicable after a pressure release, but no later than 5 calendar days after the pressure release. You must also conduct instrument monitoring, as specified in § 65.431 no later than 5 calendar days after the PRD returns to regulated material service following a pressure release to verify that the PRD is operating with an instrument reading of less than 500 ppm. An instrument reading of 500 ppm or greater is a deviation.

(c) *Pressure release management.* If your referencing subpart specifies that releases to the atmosphere from PRD in regulated material service are not allowed, you must comply with the requirements specified in paragraphs (c)(1) and (2) of this section for all PRD in regulated material service, and any release from a PRD in regulated material service is a deviation.

(1) You must equip each PRD in regulated material service with a device(s) that is capable of identifying and recording the time and duration of each pressure release and of notifying operators that a pressure release has occurred. If this instrument is capable of measuring the concentration of leaks through the PRD, then you may use this instrument to meet the requirements of paragraph (b) of this section.

(2) If any PRD in regulated material service vents or releases to atmosphere, you must calculate the quantity of regulated material released during each pressure relief event. Calculations may be based on data from the PRD monitoring alone or in combination with process parameter monitoring data and process knowledge.

(d) *PRD routed to a control device.* If all releases and potential leaks from your PRD are routed through a closed vent system to a control device, you are not required to comply with paragraphs (a), (b) or (c) (if applicable) of this section. Both the closed vent system and control device must meet § 65.413.

§ 65.425 What are the standards and compliance requirements for compressors?

You must comply with either the requirements specified in paragraph (a) or (b) of this section for compressors in regulated material service.

(a) *Seal system standard.* Each compressor must be equipped with a seal system that includes a barrier fluid system and that prevents leakage of process fluid to the atmosphere. You must comply with paragraphs (a)(1) through (4) of this section.

(1) *Compressor seal system.* Each compressor seal system must meet the applicable requirements specified in paragraph (a)(1)(i), (ii) or (iii) of this section.

(i) The seal system is operated with the barrier fluid at a pressure that is at all times greater than the compressor stuffing box pressure.

(ii) The seal system is equipped with a barrier fluid degassing reservoir that is connected by a closed vent system to a control device or is routed to a fuel gas system. The closed vent system and control device or the fuel gas system must meet § 65.413.

(iii) The seal system is equipped with a closed-loop system that purges the barrier fluid directly into a process stream.

(2) *Barrier fluid system.* The barrier fluid must not be in light liquid service. Each barrier fluid system must be equipped with a sensor that will detect failure of the seal system, barrier fluid system or both. Each sensor must be observed daily or must be equipped with an alarm unless the compressor is located within the boundary of an unmanned plant site.

(3) *Failure criterion and leak detection.* (i) You must determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system or both. If the sensor indicates failure of the seal system, the barrier fluid system or both, based on the criterion, a leak is detected, and you must repair it, pursuant to § 65.432, as applicable.

(ii) You must keep records of the design criteria, as specified in § 65.475(c)(6)(i).

(4) You must comply with § 65.430 for all potential points of vapor leakage on the compressor other than the seal system.

(b) *Alternative compressor standard.* (1) You must designate that the compressor operates with an instrument reading of less than 500 ppm above background at all times. Any instrument reading of 500 ppm above background or greater is a deviation.

(2) You must conduct instrument monitoring of all potential points of vapor leakage initially upon designation, annually and at other times requested by the Administrator to demonstrate that the compressor operates with an instrument reading of less than 500 ppm above background.

(3) You must keep records of the compliance tests, as specified in § 65.475(c)(6)(ii).

§ 65.426 What are the standards and compliance requirements for sampling connection systems?

Except as provided in paragraph (b) of this section, you must comply with the requirements specified in paragraph (a) of this section for sampling connection systems in regulated material service. For the purposes of the definition of ''sampling connection system'' in § 65.295, a continuous emission monitoring system is not an analyzer vent.

(a) *Equipment design and operation.* Each sampling connection system must be equipped with a closed-purge, closed-loop or closed vent system. Each closed-purge, closed-loop or closed vent system must meet the applicable requirements specified in paragraphs (a)(1) through (4) of this section, as applicable.

(1) Gases displaced during filling of a sample container are not required to be collected or captured.

(2) Containers that are part of a closed-purge system must be covered or closed when not being filled or emptied.

(3) Gases remaining in the tubing or piping between the closed-purge system valve(s) and sample container valves(s) after the valves are closed and a sample container is disconnected are not required to be collected or captured.

(4) Each closed-purge, closed-loop or closed vent system must be designed and operated to meet requirements in either paragraph (a)(4)(i), (ii), (iii) or (iv) of this section.

(i) Return the purged process fluid directly to the process line.

(ii) Collect and recycle the purged process fluid to a process or to a fuel gas system that meets the requirements of subpart M of this part.

(iii) Capture and transport all the purged process fluid to a control device that meets § 65.413.

(iv) Collect, store and transport the purged process fluid to a system or facility identified in paragraph (a)(4)(iv)(A), (B), (C), (D) or (E) of this section.

(A) A waste management unit, as defined in 40 CFR 63.111, if the waste management unit is subject to and operated in compliance with the provisions of 40 CFR part 63, subpart G, applicable to group 1 wastewater streams.

(B) A treatment, storage or disposal facility subject to regulation under 40 CFR parts 262, 264, 265 or 266.

(C) A facility permitted, licensed or registered by a state to manage municipal or industrial solid waste, if the process fluids are not hazardous waste, as defined in 40 CFR part 261.

(D) A waste management unit subject to and operated in compliance with the treatment requirements of § 61.348(a), provided all waste management units that collect, store or transport the purged process fluid to the treatment unit are subject to and operated in compliance with the management requirements of §§ 61.343 through 61.347.

(E) A device used to burn-off specification used oil for energy recovery in accordance with 40 CFR part 279, subpart G, provided the purged process fluid is not hazardous waste, as defined in 40 CFR part 261.

(b) *In-situ sampling systems.* In-situ sampling systems and sampling systems without purges are exempt from the requirements of paragraph (a) of this section.

§ 65.427 What are the standards and compliance requirements for open-ended valves and lines?

Except as provided in paragraph (c) of this section, you must comply with the requirements specified in paragraphs (a) and (b) of this section for all open-ended valves and lines in regulated material service.

(a) *Equipment and operational requirements.* Equip open-ended valves and lines with a cap, blind flange, plug or second valve so that the open-ended valve or line operates with an instrument reading of less than 500 ppm above background. The cap, blind flange, plug or second valve must seal the open-ended valve or line at all times, except during operations requiring process fluid flow through the

open-ended valve or line, during maintenance or during operations that require venting the line between block valves in a double block and bleed system. If the open-ended valve or line is equipped with a second valve, close the valve on the process fluid end before closing the second valve.

(b) *Instrument monitoring.* You must conduct instrument monitoring, as specified in § 65.431 on the cap, blind flange, plug or second valve installed, pursuant to paragraph (a) of this section initially upon installation, annually and at other times requested by the Administrator to demonstrate that the open-ended valve or line operates with an instrument reading of less than 500 ppm above background. Any instrument reading of 500 ppm above background or greater is a deviation.

(c) *Special provisions for open-ended valves and lines.* (1) *Emergency shutdown exemption.* Open-ended valves and lines in an emergency shutdown system that are designed to open automatically in the event of a process upset are exempt from the requirements of paragraphs (a) and (b) of this section. If your referencing subpart specifies that releases are not allowed from open-ended valves and lines in an emergency shutdown system that are designed to open automatically in the event of a process upset, than any release from such an open-ended valve or line is a deviation.

(2) *Polymerizing materials exemption.* Open-ended valves and lines containing materials that would autocatalytically polymerize or would present an explosion, serious overpressure or other safety hazard if capped or equipped with a double block and bleed system, as specified in paragraph (a) of this section are exempt from the requirements of paragraphs (a) and (b) of this section. You must instead conduct sensory monitoring, as described in § 65.430.

§ 65.428 What are the standards and compliance requirements for other equipment that contacts or contains regulated material?

You must conduct sensory monitoring, as described in § 65.430 for the equipment specified in paragraphs (a) through (i) of this section.

(a) All equipment at a plant site with less than 1,500 total pieces of equipment.

(b) Any equipment that contains or contacts regulated material, but is not in regulated material service.

(c) Equipment in regulated material service less than 300 hours per calendar year.

(d) Valves, pumps, connectors and agitators in heavy liquid service.

(e) Connectors in gas and vapor service and connectors in light liquid service not required by your referencing subpart to comply with the provisions of § 65.422.

(f) Instrumentation systems.

(g) Pressure relief devices in liquid service.

(h) Any equipment for which sensory monitoring is required specifically by a provision in §§ 65.420 through 65.427.

(i) Other equipment, as required by your referencing subpart.

§ 65.429 What are the standards and compliance requirements for equipment in closed vent systems and fuel gas systems?

You must meet the requirements of this section for equipment in any closed vent system or fuel gas system required to comply with subpart M of this part. You are not required to comply with §§ 65.420 through 65.428 for equipment complying with this section.

(a) You must conduct instrument monitoring, as specified in § 65.431 of all potential points of vapor leakage on any equipment in a closed vent system or fuel gas system initially upon installation, annually and at other times requested by the Administrator to demonstrate that the equipment operates with an instrument reading of less than 500 ppm above background. Any instrument reading of 500 ppm above background or greater is a deviation.

(b) You must keep records of the compliance tests, as specified in § 65.475(c)(9).

Equipment Leak Monitoring and Repair

§ 65.430 What are my sensory monitoring requirements?

(a) You must conduct sensory monitoring, as defined in § 65.295 for equipment identified in § 65.428. You must also comply with paragraph (b) through (d) of this section, as applicable.

(b) If indications of a potential leak to the atmosphere are found by sensory monitoring methods, you must comply with either paragraph (b)(1) or (2) of this section.

(1) Within 5 calendar days of detection, you must comply with either paragraph (b)(1)(i) or (ii) of this section.

(i) Repair the equipment, as defined in § 65.295 for indications of a potential leak to the atmosphere detected during sensory monitoring.

(ii) Determine that no bubbles are observed at potential leak sites during a leak check, using a soap solution.

(2) Conduct instrument monitoring, as described in § 65.431 within 5 calendar days of detection and repair the equipment in accordance with § 65.432 if the instrument reading is equal to or greater than the applicable level in Table 1 to this subpart.

(c) Except as provided in paragraph (c)(4) of this section, you must comply with the requirements of either paragraph (c)(1) or (2) of this section for equipment in heavy liquid service. Paragraph (c)(3) of this section describes how to determine or demonstrate that a piece of equipment is in heavy liquid service.

(1) Retain information, data and analyses used to determine that a piece of equipment is in heavy liquid service.

(2) When requested by the Administrator, demonstrate that the piece of equipment or process is in heavy liquid service.

(3) A determination or demonstration that a piece of equipment or process is in heavy liquid service shall include an analysis or demonstration that the process fluids do not meet the definition of ''in light liquid service.'' Examples of information that could document this include, but are not limited to, records of chemicals purchased for the process, analyses of process stream composition, engineering calculations or process knowledge.

(4) You are not required to comply with paragraphs (c)(1) through (3) of this section if all the equipment of a certain type (*e.g.,* valves) in your process unit is subject to sensory monitoring, as required by paragraphs (a) and (b) of this section.

(d) You must comply with the recordkeeping requirements of § 65.475(b)(5) for equipment in regulated material service less than 300 hours per calendar year.

§ 65.431 What instrument monitoring methods must I use to detect leaks?

(a) *Instrument monitoring methods.* Instrument monitoring, as required under this subpart, shall comply with the requirements specified in paragraphs (a)(1) through (7) of this section.

(1) *Monitoring method.* Monitor, as specified in Method 21 of 40 CFR part 60, appendix A–7, except as otherwise provided in this section. Traverse the instrument probe around all potential leak interfaces as close to the interface as possible, as described in Method 21 of 40 CFR part 60, appendix A–7.

(2) *Monitoring instrument performance criteria.* (i) Except as provided in paragraph (a)(2)(ii) of this section, the volatile organic compounds (VOC) monitoring instrument must meet the performance criteria of Method 21 of 40 CFR part 60, appendix A–7, except

the instrument response factor criteria in section 8.1.1.2 of Method 21 must be for the representative composition of the process fluid, not each individual hydrocarbon compound in the stream. For process streams that contain nitrogen, air, water or other inerts that are not hydrocarbons, the representative stream response factor must be determined on an inert-free basis. The response factor may be determined at any concentration for which monitoring for leaks will be conducted.

(ii) If there is no instrument commercially available that will meet the performance criteria specified in paragraph (a)(2)(i) of this section, the instrument readings may be adjusted by multiplying by the representative response factor of the process fluid, calculated on an inert-free basis, as described in paragraph (a)(2)(i) of this section.

(3) *Monitoring instrument calibration procedure.* (i) Calibrate the VOC monitoring instrument before use on each day of its use by the procedures specified in Method 21 of 40 CFR part 60, appendix A–7.

(ii) Perform a calibration drift assessment, at a minimum, at the end of each monitoring day, as specified in paragraphs (a)(3)(ii)(A) through (D) of this section.

(A) Check the instrument using the same calibration gas(es) that were used to calibrate the instrument before use. Follow the procedures specified in Method 21 of 40 CFR part 60, appendix A–7, section 10.1, except do not adjust the meter readout to correspond to the calibration gas value.

(B) Record the instrument reading for each scale used, as specified in paragraph (b) of this section. Divide these readings by the initial calibration values for each scale and multiply by 100 to express the calibration drift as a percentage.

(C) If any calibration drift assessment shows a negative drift of more than 10 percent from the initial calibration value, then you must re-monitor all equipment monitored since the last calibration with instrument readings below the applicable leak definition and above the applicable leak definition adjusted for negative drift. Determine the leak definition adjusted for negative drift according to Equation 4 of this section:

$$L_{ND} = L \times \frac{(100 - ND)}{100} \qquad \text{(Eq. 4)}$$

Where:

L_{ND} = Applicable leak definition adjusted for negative drift, ppm.
L = Applicable leak definition, ppm.
ND = Magnitude of negative drift calculated, as described in paragraph (a)(3)(ii)(B) of this section, percent.

(D) If any calibration drift assessment shows a positive drift of more than 10 percent from the initial calibration value, then, at your discretion, you may re-monitor all equipment monitored since the last calibration with instrument readings above the applicable leak definition and below the applicable leak definition adjusted for positive drift. Determine the leak definition adjusted for positive drift according to Equation 5 of this section:

$$L_{PD} = L \times \frac{(100 + PD)}{100} \qquad \text{(Eq. 5)}$$

Where:

L_{PD} = Applicable leak definition adjusted for positive drift, ppm.
L = Applicable leak definition, ppm.
PD = Magnitude of positive drift calculated, as described in paragraph (a)(3)(ii)(B) of this section, percent.

(4) *Monitoring instrument calibration gas.* Calibration gases shall be zero air (less than 10 ppm of hydrocarbon in air); and the gases specified in paragraph (a)(4)(i) of this section, except as provided in paragraph (a)(4)(ii) of this section.

(i) Mixtures of methane in air at a concentration no more than 2,000 ppm greater than the leak definition concentration of the equipment monitored. If the monitoring instrument's design allows for multiple calibration scales, then calibrate the lower scale with a calibration gas that is no higher than 2,000 ppm above the concentration specified as a leak and calibrate the highest scale with a calibration gas that is approximately equal to 10,000 ppm. If only one scale on an instrument will be used during monitoring, you need not calibrate the scales that will not be used during that day's monitoring.

(ii) A calibration gas other than methane in air may be used if the instrument does not respond to methane or if the instrument does not meet the performance criteria specified in paragraph (a)(2)(i) of this section. In such cases, the calibration gas may be a mixture of one or more of the compounds to be measured in air.

(5) *Monitoring performance.* Perform monitoring when the equipment is in regulated material service or is in use with any other material that is detectable by an instrument operated in accordance with Method 21 of 40 CFR part 60, appendix A–7, and paragraphs (a)(1) through (4) of this section.

(6) *Monitoring data.* Monitoring data obtained prior to the regulated source becoming subject to the referencing subpart that do not meet the criteria specified in paragraphs (a)(1) through (5) of this section may still be used to qualify initially for less frequent monitoring under the provisions in § 65.420(a)(2) or (3) for valves or § 65.422(a)(3) for connectors, provided the departures from the criteria or from the specified monitoring frequency of § 65.420(a)(2) or (3) or § 65.422(a)(3) are minor and do not significantly affect the quality of the data. Examples of minor departures are monitoring at a slightly different frequency (such as every 6 weeks instead of monthly or quarterly), following the performance criteria of section 8.1.1.2 of Method 21 of 40 CFR part 60, appendix A–7, instead of paragraph (a)(2) of this section, or monitoring using a different leak definition if the data would indicate the presence or absence of a leak at the concentration specified in this subpart. Failure to use a calibrated instrument is not considered a minor departure.

(7) *Instrument monitoring using local ambient concentration (background) adjustments.* You may elect to adjust the instrument readings for the local ambient concentration (''background''). If you elect to adjust instrument readings for background, you must determine the local ambient

concentration using the procedures in section 8.3.2 of Method 21 of 40 CFR part 60, appendix A–7.

(b) *Using instrument readings.* (1) If you elect not to adjust instrument readings for background, as described in paragraph (a)(7) of this section, you must comply with paragraphs (b)(1)(i) and (ii) of this section.

(i) Monitor the equipment according to the procedures specified in paragraphs (a)(1) through (5) of this section.

(ii) Compare all instrument readings directly to the applicable leak definition or performance level for the monitored equipment to determine whether there is a leak or to determine compliance with § 65.424(a) (pressure relief devices), § 65.425(b) (alternative compressor standard) or § 65.427(b) (open-ended lines and valves).

(2) If you elect to adjust instrument readings for background, as described in paragraph (a)(7) of this section, you must comply with paragraphs (b)(2)(i) through (iv) of this section.

(i) Monitor the equipment according to the procedures specified in paragraphs (a)(1) through (5) of this section.

(ii) Determine the background level, as described in paragraph (a)(7) of this section.

(iii) Compute the arithmetic difference between the maximum concentration indicated by the instrument and the background level determined.

(iv) Compare this arithmetic difference to the applicable leak definition or performance level for the monitored equipment to determine whether there is a leak or to determine compliance with § 65.424(a) (pressure relief devices), § 65.425(b) (alternative compressor standard) or § 65.427(b) (open-ended lines and valves).

§ 65.432 What are my leak identification and repair requirements?

(a) *Leaking equipment identification and records.*

(1) When each leak is detected, pursuant to §§ 65.420 through 65.428, § 65.440 or § 65.450, attach a weatherproof and readily visible identification to the leaking equipment.

(2) When each leak is detected, record and keep the information specified in § 65.475(b)(8)(i).

(b) *Leak repair schedule.* (1) Except as provided in paragraph (b)(4) of this section, you must make a first attempt at repair, as defined in § 65.295, no later than 5 calendar days after the leak is detected. First attempt at repair for pumps includes, but is not limited to, tightening the packing gland nuts and/or ensuring that the seal flush is operating at design pressure and temperature. First attempt at repair for valves includes, but is not limited to, tightening the bonnet bolts, and/or replacing the bonnet bolts, and/or tightening the packing gland nuts, and/or injecting lubricant into the lubricated packing. Unless you determine, by other means, that the first attempt at repair was not successful, you must conduct instrument monitoring following the first attempt at repair, but no later than 5 calendar days after the leak is detected to determine whether the first attempt at repair was successful.

(2) Except as provided in paragraphs (b)(4), (d) and (e) of this section, if the first attempt at repair required by paragraph (b)(1) of this section was not successful, you must repair each leak detected as soon as practical, but not later than 15 calendar days after it is detected. If required by the applicable definition of ''repair'' in § 65.295, you must conduct monitoring following the repair, but no later than 15 calendar days after the leak is detected to determine whether the repair was successful.

(3) You must keep records, as specified in § 65.475(b)(8)(ii) through (iv).

(4) You may designate equipment as unsafe-to-repair, if you determine that repair personnel would be exposed to an immediate danger as a consequence of complying with the repair requirements of this subpart. You are not required to comply with paragraphs (b)(1) and (2) for equipment that you have designated unsafe-to-repair, but you must keep records, as specified in § 65.475(b)(8)(v). You must also comply with paragraph (d) of this section.

(c) *Leak identification removal.*

(1) *Valves in gas and vapor service.* The leak identification on a valve may be removed after it has been monitored, as specified in § 65.420(c)(2) and no leak has been detected during that monitoring.

(2) *Connectors in gas and vapor service.* The leak identification on a connector may be removed after it has been monitored, as specified in § 65.422(c)(2) and no leak has been detected during that monitoring.

(3) *Other equipment.* Except as specified in paragraphs (c)(1) and (2) of this section, you may remove the identification that you placed, pursuant to § 65.432(a)(1), on equipment determined to have a leak after it is repaired.

(d) *Delay of repair.* Delay of repair is allowed for any of the conditions specified in paragraphs (d)(1) through (5) of this section. If you delay repair, you must comply with paragraph (e) of this section. You must also maintain records, as specified in § 65.475(b)(8)(vi) and (vii).

(1) Delay of repair of equipment for which leaks have been detected is allowed if repair within 15 days after a leak is detected is technically infeasible without a process unit shutdown, provided you comply with paragraphs (d)(1)(i) through (iii) of this section.

(i) You must repair this equipment as soon as practical, but no later than the end of the next process unit shutdown or 5 years after detection, whichever is sooner. For the purposes of this section, a process unit shutdown is any shutdown that lasts more than 24 hours, regardless of whether it was planned or unplanned.

(ii) Except as specified in paragraph (d)(1)(iii) of this section, you must repair all equipment for which you have delayed repair during the process unit shutdown.

(iii) If you detect a leak less than 15 days before the process unit shutdown, you are not required to repair that leak during the process unit shutdown.

(2) Delay of repair of equipment for which leaks have been detected is allowed if the equipment is designated as unsafe to repair according to paragraph (b)(4) of this section. You must repair this equipment as soon as practical, but no later than the end of the next process unit shutdown or 5 years after detection, whichever is sooner.

(3) Delay of repair of equipment for which leaks have been detected is allowed for equipment that you isolate from the process such that it does not contact or contain regulated material.

(4) Delay of repair for valves, connectors and agitators is also allowed if you meet the provisions of paragraphs (d)(4)(i) and (ii) of this section.

(i) You document the planned repair date and demonstrate that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair.

(ii) When you do repair the equipment, the purged material is collected and destroyed, collected and routed to a fuel gas system or routed through a closed vent system to a control device. The fuel gas system or the closed vent system and the control device must meet § 65.413.

(5) Delay of repair for pumps is also allowed if you meet the provisions of paragraphs (d)(5)(i) and (ii) of this section.

(i) Repair will consist of any of the design changes specified in paragraph (d)(5)(i)(A), (B), (C) or (D) of this section.

(A) Replacing the existing seal design with a new system that you have determined will provide better performance. You must document the demonstration that the new system will provide better performance than the existing seal.

(B) Installing a dual mechanical seal system that meets the requirements of § 65.421(d)(1).

(C) Installing a pump that meets the requirements of § 65.421(d)(2).

(D) Installing a system that routes emissions through a closed vent system to a control device or to a fuel gas system. The closed vent system and control device or the fuel gas system must meet § 65.413.

(ii) You complete repair as soon as practical, but not later than 6 months after the leak was detected.

(e) *Requirements following the determination that delay of repair is necessary.* (1) You must continue to monitor equipment for which you have delayed repair according to the provisions of paragraph (d)(1), (2), (4) or (5) of this section. You must monitor the equipment on the schedule required by §§ 65.420 through 65.427, § 65.440 or § 65.450, as applicable. You must maintain records of this monitoring, as specified in § 65.475(b)(8)(viii).

(2) If you delay repair for a pump or agitator according to the provisions of paragraph (d)(1), (2), (3), (4) or (5) of this section, you may suspend the weekly visual inspection required by § 65.421(c) for pumps or § 65.423(c) for agitators.

(3) Unless it is technically infeasible to do so, when you repair a valve or connector for which you have delayed repair according to the provisions of paragraph (d)(1), (2), (3) or (4) of this section, you must replace the leaking equipment with low leak technology, as described in paragraphs (e)(3)(i) through (iv) of this section. You must develop a written plan that addresses the demonstration of whether a device or repair technique qualifies as low leak technology, criteria for selecting the low leak technology to be used for a repair and installation procedures for the selected technology.

(i) Low leak technology for valves includes, but is not limited to, the options in paragraphs (e)(3)(i)(A) through (D) of this section.

(A) Repacking the valve or replacing the existing valve packing with low emissions packing.

(B) Replacing the leaking valve with a valve designed to accommodate low emissions packing.

(C) Replacing the existing valve with a bellow seal valve.

(D) Other repair or replacement that has been tested rigorously and did not leak above 500 ppm during the entirety of the test.

(ii) Low leak technology for connectors includes, but is not limited to, the options in paragraphs (e)(3)(ii)(A) through (C) of this section.

(A) Replacing the flange gasket.

(B) Replacing the entire connector.

(C) Other repair or replacement that has been tested rigorously and did not leak above 500 ppm during the entirety of the test.

(iii) If you cannot replace the leaking equipment with low leak technology, then you would be required to explain why that replacement is technically infeasible in your annual periodic report, pursuant to § 65.470(c)(3).

(iv) If that equipment leaks again in the future and you delay the repair beyond 15 days, you must conduct a new analysis of the technical feasibility of using low leak technology.

Alternative Equipment Leak Standards

§ 65.440 What is the alternative means of emission limitation for equipment in batch operations?

For equipment in a batch operation that operates in regulated material service during the calendar year, you may comply with the equipment monitoring requirements specified in paragraphs (a) through (c) of this section as an alternative to complying with the requirements of §§ 65.420 through 65.427.

(a) You must comply with the requirements of §§ 65.420 through 65.427, as modified by paragraph (b) of this section.

(b) Monitor the equipment to detect leaks by the method specified in § 65.431 and as specified in paragraphs (b)(1) through (3) of this section.

(1) Each time the process components and transport piping are reconfigured for the production of a different product, monitor the equipment in the reconfigured process unit for leaks within 30 days of startup of the process. Do not include this initial monitoring of reconfigured equipment in determining percent leaking equipment in the process unit.

(2) You may elect to monitor pumps, valves and agitators at the frequencies specified in Table 2 to this subpart. Determine the operating time as the proportion of the year the batch operation that is subject to the provisions of this subpart is operating.

(3) The monitoring frequencies specified in paragraph (b)(2) of this section are not requirements for monitoring at specific intervals and can be adjusted to accommodate process operations. You may monitor anytime during the specified monitoring period (*e.g.,* month, quarter, year), provided the monitoring is conducted at a reasonable interval after completion of the last monitoring campaign. Reasonable intervals are defined in § 65.280.

(c) You must keep the records for equipment in batch operations, as specified in § 65.475(d).

Optical Gas Imaging Standards for Detecting Equipment Leaks

§ 65.450 What are the standards and compliance requirements for using an optical gas imaging instrument to detect leaks?

(a) *Introduction.* This section contains requirements for the use of an optical gas imaging instrument used to identify leaking equipment.

(b) *Applicability.* You may only use an optical gas imaging instrument to screen for leaking equipment if the requirements in paragraphs (b)(1) through (3) of this paragraph are met.

(1) Your referencing subpart must directly reference this section and specify that the use of an optical gas imaging instrument is allowed to screen for leaking equipment.

(2) The optical gas imaging instrument must be able to meet all of the criteria and requirements specified in 40 CFR part 60, appendix K for optical gas imaging instruments, and you must conduct monitoring, as specified in 40 CFR part 60, appendix K.

(3) You may only use the optical gas imaging instrument as an alternative to provisions that would otherwise require you to conduct monitoring, as described in §§ 65.430 and 65.431. You must continue to comply with all other requirements in §§ 65.420 through 65.427 (*e.g.,* weekly inspections of pumps, pursuant to § 65.421(c); for PRD, installation of a device that is capable of identifying and recording the time and duration of each pressure release, pursuant to § 65.424(c), if applicable; sampling connection system requirements in § 65.426).

(c) *Compliance requirements.* You must meet the requirements of paragraphs (c)(1) through (7) of this section.

(1) Pursuant to § 65.415, you must identify the equipment and process units for which the optical gas imaging instrument will be used to identify leaks.

(2) Unless your referencing subpart specifies otherwise, the leak detection level for all equipment is 60 grams per hour.

(3) Unless your referencing subpart specifies otherwise, you must monitor all equipment identified in paragraph (c)(1) of this section bimonthly.

(4) For equipment identified in paragraph (c)(1) of this section, you may not use the provisions for less frequent monitoring, based on the percent of equipment leaking in §§ 65.420(a)(2) and 65.422(a)(3).

(5) When following the leak survey procedure in 40 CFR part 60, appendix K, a leak is detected if you see any emissions using the optical gas imaging instrument. The leaking equipment must be identified for repair, as required in § 65.432(a).

(6) You must repair the leaking equipment as required in § 65.432(b) through (e).

(7) Monitoring to confirm repair of leaking equipment must be conducted using the procedures referenced in paragraph (b)(2) of this section.

(d) *Recordkeeping.* You must comply with the requirements in § 65.475(e).

Notifications, Reports and Records

§ 65.470 What notifications and reports must I submit?

(a) *Notification of Compliance Status.* You must include the information listed in paragraphs (a)(1) through (4) of this section, as applicable, in the Notification of Compliance Status that you submit according to the procedures in § 65.225.

(1) The notification must provide the information listed in paragraphs (a)(1)(i) through (iii) of this section for each regulated source subject to the requirements of this subpart.

(i) Process unit, closed vent system or fuel gas system identification.

(ii) Number of each equipment type (*e.g.,* valves, pumps).

(iii) Method of compliance with the standard (*e.g.,* ''monthly leak detection and repair,'' ''equipped with dual mechanical seals,'' ''in vacuum service'').

(2) For valves subject to § 65.420 and connectors subject to § 65.422, provide the historical monitoring data you are using to qualify for less frequent monitoring in lieu of having to do initial monitoring, if applicable.

(3) If you are required to comply with § 65.424(c), provide the information in paragraphs (a)(3)(i) and (ii) of this section.

(i) Description of the monitoring system to be implemented, including the PRD and process parameters to be monitored.

(ii) A description of the alarms or other methods by which operators will be notified of a release.

(4) For closed vent systems, non-flare control devices and fuel gas systems, pursuant to § 65.413, provide the applicable information specified in § 65.880.

(b) Semiannual periodic report. You must report the information specified in paragraphs (b)(1) through (5) of this section, as applicable, in the semiannual periodic report that you submit, as specified in § 65.225.

(1) For compressors, pursuant to § 65.425(b), that are to be operated with an instrument reading of less than 500 ppm, report the date of any instrument reading 500 ppm or greater and the date of the next instrument reading of less than 500 ppm.

(2) For PRD in gas or vapor service, pursuant to § 65.424(b), any instrument reading of 500 ppm or greater, more than 5 days after the PRD returns to service after a release.

(3) For open-ended valves and lines, pursuant to § 65.427(b), report the date of any instrument reading 500 ppm or greater and the date of the next instrument reading of less than 500 ppm.

(4) If your referencing subpart specifies that releases are not allowed from PRD in regulated material service to the atmosphere, report each release, including duration of the release and estimate of quantity of substances released.

(5) For open-ended lines in an emergency shutdown system that are designed to open automatically in the event of a process upset (and are not required to install a cap/plug), report each release if your referencing subpart states that releases from these types of open-ended lines are not allowed.

(6) For equipment in closed vent systems and fuel gas systems, pursuant to § 65.429, report the date of any instrument reading 500 ppm or greater and the date of the next instrument reading of less than 500 ppm.

(7) For closed vent systems, non-flare control devices and fuel gas systems, pursuant to § 65.413, provide the applicable information specified in § 65.882. For flares, report any instances when visual emissions occur longer than 5 minutes during any 2 consecutive hours, a pilot flame is out, or the pilot flames are not monitored.

(c) *Annual periodic report.* You must report the information specified in paragraphs (c)(1) through (8) of this section, as applicable, in the annual periodic report that you submit, as specified in § 65.225.

(1) Provide a summary table that includes the information specified in paragraphs (c)(1)(i) through (iv) of this section for each process unit.

(i) For the equipment specified in paragraphs (c)(1)(i)(A) through (E) of this section, report the number of each type of equipment for which leaks were detected.

(A) Valves, pursuant to § 65.420(a).

(B) Pumps, pursuant to § 65.421(a), (d)(1)(v)(B) and (d)(1)(vii).

(C) Connectors, pursuant to § 65.422(a).

(D) Agitators, pursuant to § 65.423(a), (d)(1)(v)(B) and (d)(1)(vii).

(E) Compressors, pursuant to § 65.425(a).

(ii) Report the total number of valves and connectors monitored and the percent leaking, pursuant to §§ 65.420(b) (valves) and 65.422(b) (connectors).

(iii) For each type of equipment specified in paragraphs (c)(1)(i)(A) through (E) of this section, report the number of leaks that were not repaired, as required by § 65.432.

(iv) Identify the number of valves that are determined by § 65.420(b)(3) to be non-repairable.

(2) Where you delay any repair, pursuant to § 65.432(d), report that delay of repair has occurred and explain why delay of repair is necessary.

(3) If you delayed repair for a valve or connector and you demonstrated that it is technically infeasible to repair the equipment using low leak technology, pursuant to § 65.432(e)(3), include documentation of that demonstration.

(4) For PRD subject to § 65.424(b), report confirmation that you conducted all monitoring to show compliance conducted within the reporting period.

(5) For compressors, pursuant to § 65.425(b), that are to be operated with an instrument reading of less than 500 ppm, report confirmation that you conducted all monitoring to show compliance conducted within the reporting period.

(6) For open-ended lines and valves, pursuant to § 65.427(b), report confirmation that you conducted all monitoring to show compliance conducted within the reporting period.

(7) For equipment in closed vent systems and fuel gas systems, pursuant to § 65.429, report confirmation that you conducted all monitoring to show compliance conducted within the reporting period.

(8) Report the information listed in § 65.470(a)(1) through (3) for the Notification of Compliance Status for regulated sources with later compliance dates. Report any revisions to items reported in an earlier Notification of Compliance Status if the method of compliance has changed since the last report.

§ 65.475 What are my recordkeeping requirements?

(a) *Recordkeeping system.* You may develop and use one recordkeeping system to comply with the

recordkeeping requirements for all of your sources that are subject to the provisions of this subpart. The recordkeeping system must identify the type of program being implemented (e.g., quarterly monitoring, dual mechanical seals) for each type of equipment. The records required by this subpart are specified in paragraphs (b) through (f) of this section.

(b) *General equipment records.* (1) As specified in § 65.415, you must keep equipment identification records if the equipment is not physically tagged and you elect to identify the equipment subject to this subpart through written documentation such as a log or other designation.

(2) If you designate equipment as either unsafe- or difficult-to-monitor, you must keep the records specified in paragraph (b)(2)(i) through (iii) of this section onsite as long as the equipment is designated as either unsafe- or difficult-to-monitor.

(i) You must maintain the identity of unsafe- and difficult-to-monitor equipment, as specified in § 65.416(a).

(ii) You must keep records of the planned schedule for monitoring unsafe- or difficult-to-monitor equipment and an explanation why the equipment is unsafe- or difficult-to-monitor, as specified in § 65.416(a)(3).

(iii) You must keep a written plan for monitoring unsafe- or difficult-to-monitor equipment, as required by § 65.416(a)(4). Your plan must include procedures for repairing any leaks found when monitoring is conducted.

(3) You must maintain the identity of compressors operating with an instrument reading of less than 500 ppm, as specified in § 65.416(c).

(4) You must keep records associated with the determination that equipment is in heavy liquid service, as specified in § 65.430(c), if applicable.

(5) You must keep records associated with the determination that equipment is in regulated material service less than 300 hours per calendar year, as specified in § 65.430(d), if applicable.

(6) For equipment in vacuum service, you must keep records of any pressure alarms triggered, including the date and time the alarm was triggered, as well as the duration the equipment was not in vacuum service.

(7) You must maintain records of the information specified in paragraphs (b)(7)(i) through (vi) of this section for monitoring instrument calibrations conducted according to sections 8.1.2 and 10 of Method 21 of 40 CFR part 60, appendix A–7, and § 65.431(a)(3) and (4).

(i) Date of calibration and initials of operator performing the calibration.

(ii) Calibration gas cylinder identification, certification date and certified concentration.

(iii) Instrument scale(s) used.

(iv) A description of any corrective action taken if the meter readout could not be adjusted to correspond to the calibration gas value in accordance with section 10.1 of Method 21 of 40 CFR part 60, appendix A–7.

(v) Results of each calibration drift assessment required by § 65.431(a)(3)(ii) (*i.e.,* instrument reading for calibration at end of the monitoring day and the calculated percent difference from the initial calibration value).

(vi) If you make your own calibration gas, a description of the procedure used.

(8) You must keep the records specified in paragraphs (b)(8)(i) through (viii) of this section for leaking equipment detected according to § 65.431 and repaired according to § 65.432. You must keep the information for connectors complying with the 8-year monitoring period allowed under § 65.422(a)(3)(iii) for 5 years beyond the date of its last use.

(i) The date the leak was detected and the maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A–7, including the background concentration if you elect to adjust instrument readings for background, as described in § 65.431(a)(7).

(ii) The date of first attempt to repair the leak.

(iii) The date of successful repair of the leak.

(iv) Maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A–7, at the time the leak is successfully repaired or determined to be non-repairable.

(v) A record of the identity and an explanation, as specified in § 65.432(b)(4) for any equipment designated as unsafe-to-repair.

(vi) ''Repair delayed,'' the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak and, where appropriate, why the repair was technically infeasible without a process unit shutdown, pursuant to § 65.432(d)(1), or the calculation showing that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair, pursuant to § 65.432(d)(4)(i). As an alternative to listing the reason for delay of repair for each leak, you may elect to develop written guidelines that identify the conditions that justify a delay of repair. If you elect to develop written guidelines, you may document the reason for delay of repair for each leak in your records by citing the relevant sections of the written guidelines. You must maintain the written guidelines at the plant site.

(vii) Dates of process unit shutdowns that occur while the equipment is unrepaired.

(viii) Instrument readings measured by Method 21 of 40 CFR part 60, appendix A–7, while repair is delayed.

(9) You must keep the applicable records specified in § 65.860 for closed vent systems, control devices and fuel gas systems used to comply with this subpart.

(c) *Specific equipment records.* You must keep the records specified in paragraphs (c)(1) through (9) of this section as applicable to the compliance options with which you are complying.

(1) For valves, you must maintain the records specified in paragraphs (c)(1)(i) through (iii) of this section.

(i) The start and end dates of each monitoring period for each process unit, as specified in § 65.420(a)(2).

(ii) If you decided to subgroup valves, pursuant to § 65.420(a)(3), the valve subgrouping records specified in paragraphs (c)(1)(ii)(A) through (D) of this section.

(A) Which valves are assigned to each subgroup.

(B) Monitoring results and calculations made for each subgroup for each monitoring period.

(C) Which valves are reassigned, the last monitoring result prior to reassignment and when they were reassigned.

(D) The results of the semiannual overall performance calculation required in § 65.420(a)(3)(iii).

(iii) The inputs and results for the calculation to determine percent leaking valves in § 65.420(b)(1).

(2) For pumps, you must maintain the records specified in paragraphs (c)(2)(i) through (iii) of this section.

(i) Pursuant to § 65.421(c), documentation that pump visual inspections occurred, the date of each inspection and the results of each inspection, including a description of the characteristics of the liquids dripping, if observed.

(ii) Pursuant to § 65.421(d)(1)(v), documentation that dual mechanical seal pump visual inspections occurred, the date of each inspection and the results of each inspection.

(iii) Pursuant to § 65.421(d)(1)(vi), documentation of the criteria that indicate failure of the seal system, the barrier fluid system or both. Record the design criteria selected, explanations of how those criteria were selected and any changes to the criteria and the reason for the changes.

(3) For connectors, you must maintain the records specified in paragraphs (c)(3)(i) and (ii) of this section.

(i) The start date and end date of each monitoring period for each process unit, pursuant to § 65.422(a)(3).

(ii) The inputs and results for the calculation to determine percent leaking connectors in § 65.422(b).

(4) For agitators, you must maintain the records specified in paragraphs (c)(4)(i) through (iii) of this section.

(i) Pursuant to § 65.423(c), documentation that agitator seal visual inspections occurred, the date of each inspection and the results of each inspection.

(ii) Pursuant to § 65.423(d)(1)(v), documentation that dual mechanical seal agitator visual inspections occurred, the date of each inspection and the results of each inspection.

(iii) Pursuant to § 65.423(d)(1)(vi), documentation of the criteria that indicate failure of the seal system, the barrier fluid system or both. Record the design criteria selected, explanations of how those criteria were selected, and any changes to the criteria and the reason for the changes. This record must be available for review by an inspector.

(5) For pressure relief devices, you must maintain records of the information specified in paragraphs (c)(5)(i) through (iii) of this section.

(i) Pursuant to § 65.424(b), the dates of pressure releases and the dates and results of monitoring following a pressure release, including the background level measured and the maximum instrument reading measured during the monitoring (or the concentration measured by the monitor required by § 65.424(c), if applicable).

(ii) Pursuant to § 65.424(b)(2), the date the rupture disk was replaced.

(iii) Pursuant to § 65.424(c)(2), the quantity of regulated material released during each pressure relief event.

(6) For compressors, you must maintain the records specified in paragraphs (c)(6)(i) and (ii) of this section.

(i) Pursuant to § 65.425(a)(3), documentation of the criteria that indicate failure of the seal system, the barrier fluid system or both. Record the design criteria selected, explanations of how those criteria were selected, and any changes to the criteria and the reason for the changes.

(ii) Pursuant to § 65.425(b), for compressors operating under the alternative compressor standard, records of the dates and results of each compliance test, including the background level measured and the maximum instrument reading measured during each compliance test.

(7) For sampling connection systems complying with § 65.426, you must maintain the records specified in paragraphs (c)(7)(i) and (ii) of this section.

(i) Records of the date of each purge.

(ii) An estimate of the amount of material purged.

(8) Pursuant to § 65.427(b), for open-ended valves and lines, records of the dates and results of each compliance test, including the background level measured and the maximum instrument reading measured during each compliance test.

(9) Pursuant to § 65.413, for equipment in closed vent systems and fuel gas systems, records of the dates and results of each compliance test, including the background level measured and the maximum instrument reading measured during each compliance test.

(d) *Records for the alternative compliance option for equipment in batch operations.* For equipment in each batch operation complying with § 65.440, you must maintain the records specified in paragraphs (b) and (c) of this section, as applicable, as well as paragraphs (d)(1) through (3) of this section.

(1) Prepare a list of equipment added to the batch operation since the last monitoring period required in § 65.440.

(2) Record and keep, pursuant to the referencing subpart and this subpart, the date and results of the monitoring required in § 65.440 for equipment added to a batch operation since the last monitoring period. If no leaking equipment is found during this monitoring, you must record that the inspection was performed, but records of the actual monitoring results are not required.

(3) Maintain records demonstrating the proportion of the time during the calendar year the equipment is in use in a batch operation that is subject to the provisions of this subpart. Examples of suitable documentation are records of time in use for individual pieces of equipment or average time in use for the process unit. These records are not required if you do not adjust monitoring frequency by the time in use, as provided in § 65.440(b)(2) and (3).

(4) Document that the equipment was in service at the time you conducted instrument monitoring, pursuant to § 65.440.

(e) *Records for optical gas imaging.* Pursuant to § 65.450, you must keep the records described in paragraphs (e)(1) through (5) of this section:

(1) The equipment and process units for which you choose to use the optical gas imaging instrument.

(2) All records required by 40 CFR part 60, appendix K.

(3) A video record to document the leak survey results. The video record must include a time and date stamp for each monitoring event.

(4) Identification of the equipment screened and the time and date of the screening.

(5) Documentation of repairs attempted and repairs delayed, as specified in paragraph (b)(8)(ii) through (viii) of this section. If you confirm repair of a leak using the optical gas imaging instrument, then instead of the maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A–7 required by paragraph (b)(8)(iv) of this section, you must keep a video record following repair to confirm the equipment is repaired. You must keep the information for connectors complying with the 8-year monitoring period allowed under § 65.422(a)(3)(iii) for 5 years beyond the date of its last use.

(f) *Flare records.* If you use a flare as specified in § 65.413, you must keep records of all visual emissions observed, periods when a pilot flame is out, and any periods that the pilot flames are not monitored.

Other Requirements and Information

§ 65.490 What definitions apply to this subpart?

All terms used in this subpart have the same meaning given in the Clean Air Act and subpart H of this part, unless otherwise specified in the referencing subpart.

List of Tables in Subpart J of Part 65

TABLE 1 TO SUBPART J OF PART 65—INSTRUMENT READINGS THAT DEFINE A LEAK FOR EQUIPMENT COMPLYING WITH § 65.430(B)(2)

If you comply with § 65.430(b)(2) for . . .	The instrument reading that defines a leak is . . .
1. Valves	i. 500 ppm.

TABLE 1 TO SUBPART J OF PART 65—INSTRUMENT READINGS THAT DEFINE A LEAK FOR EQUIPMENT COMPLYING WITH § 65.430(B)(2)—Continued

If you comply with § 65.430(b)(2) for . . .	The instrument reading that defines a leak is . . .
2. Pumps	i. 5,000 ppm for pumps handling polymerizing monomers and 2,000 ppm for all other pumps.
3. Connectors	i. 500 ppm.
4. Agitators	i. 10,000 ppm.
5. Instrumentation systems	i. 10,000 ppm.
6. PRD	i. 500 ppm.
7. Compressors	i. 500 ppm.
8. Open ended valves or lines	i. 500 ppm.

TABLE 2 TO SUBPART J OF PART 65—MONITORING FREQUENCY FOR EQUIPMENT IN BATCH OPERATIONS COMPLYING WITH § 65.440

If the equipment in a batch operation is in use . . .	And you would be required to monitor the equipment in a process operating the entire year . . .	You must monitor the equipment in the batch operation . . .
1. 0 to less than 25 percent of the hours during the year	a. Monthly	i. Quarterly.
	b. Quarterly	i. Annually.
	c. Semiannually	i. Annually.
2. 25 to less than 50 percent of the hours during the year	a. Monthly	i. Quarterly.
	b. Quarterly	i. Semiannually.
	c. Semiannually	i. Annually.
3. 50 to less than 75 percent of the hours during the year	a. Monthly	i. Bimonthly.
	b. Quarterly	i. Three times per year.
	c. Semiannually	i. Semiannually.
4. 75 to 100 percent of the hours during the year	a. Monthly	i. Monthly.
	b. Quarterly	i. Quarterly.
	c. Semiannually	i. Semiannually.

5. Add subpart M to read as follows:

Sec.

Subpart M—National Uniform Emission Standards for Control Devices

General

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65.701 Am I subject to this subpart?
65.702 What are my general requirements for complying with this subpart?
65.703 What parts of my plant does this subpart cover?
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65.712 What are the requirements for continuous parameter monitoring systems (CPMS)?
65.713 How do I establish my operating limits?
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65.732 What monitoring requirements must I meet for fuel gas systems?
65.740 What monitoring requirements must I meet for absorbers?
65.742 What monitoring requirements must I meet for adsorbers regenerated onsite?
65.744 What monitoring requirements must I meet for non-regenerative adsorbers?
65.746 What requirements must I meet for condensers?
65.748 What requirements must I meet for biofilters?
65.760 What requirements must I meet for sorbent injection and collection systems?
65.762 What requirements must I meet for fabric filters?
65.800 What requirements must I meet for other control devices?

Performance Testing

65.820 What are the performance testing requirements?
65.821 At what process conditions must I conduct performance testing?
65.822 At what process conditions must I conduct performance testing for batch process operations?
65.823 How do I sample from vent streams?
65.824 What is the performance test duration?
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Batch Emission Calculations

65.835 What emissions calculations must I use for batch process operations for purposes of compliance with an aggregated percent reduction?

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65.882 What information must I submit in my semiannual periodic report?

65.884 What other reports must I submit and when?

List of Tables in Subpart M of Part 65

Table 1 to Subpart M of Part 65—CEMS Monitoring
Table 2 to Subpart M of Part 65—Monitoring Equipment as an Alternative to CEMS Monitoring
Table 3 to Subpart M of Part 65—Operating Parameters, Operating Limits and Data Monitoring, Recordkeeping and Compliance Frequencies
Table 4 to Subpart M of Part 65—Calibration and Quality Control Requirements for CPMS
Table 5 to Subpart M of Part 65—Methods and Procedures for Conducting Performance Tests for Vent Streams

Subpart M—National Uniform Emission Standards for Control Devices

General

§ 65.700 What is the purpose of this subpart?

This subpart specifies requirements to meet the emission standards of a referencing subpart for closed vent systems, control devices and routing of air emissions to a fuel gas system.

§ 65.701 Am I subject to this subpart?

You are subject to this subpart if you are an owner or operator who is subject to a referencing subpart and you have been expressly directed to comply with this subpart by a referencing subpart.

§ 65.702 What are my general requirements for complying with this subpart?

(a) You must comply with the following:

(1) The applicable provisions of subpart H of this part.

(2) The General Provisions that are applicable to the referencing subpart (*i.e.,* subpart A of parts 60, 61 or 63 of this chapter), as specified in subpart H and the referencing subpart.

(3) The section(s) of this subpart corresponding to the control measure(s) being used.

(4) § 65.720 for closed vent systems.

(5) All applicable requirements referenced in the provisions listed in paragraphs (a)(1) through (4) of this section.

(b) *Operation of closed vent systems, control devices or fuel gas systems.* You must operate closed vent systems, control devices or fuel gas systems used to comply with the referencing subpart, at all times when emissions are vented to or collected by these systems or devices.

(c) *Halogenated vent streams.* Unless required to do so by paragraph (d) of this section, you may determine whether each vent stream is halogenated by establishing the mass emission rate and the vent stream concentration (parts per million by volume (ppmv), by compound) of halogen atoms, based on one or more of the procedures specified in paragraphs (c)(1) through (5) of this section.

(1) Process knowledge that no halogen, hydrogen halides or organic halides are present in the process.

(2) Applicable engineering assessment, as discussed in § 65.830.

(3) Concentration of compounds containing halogen and hydrogen halides measured by Method 26 or 26A at 40 CFR part 60, appendix A–8, and organic halides measured by Method 18 of 40 CFR part 60, appendix A–6.

(4) Concentration of compounds containing hydrogen halides may be measured by Method 320 at 40 CFR part 63, appendix A.

(5) Any other method or data that has been validated according to the applicable procedures in Method 301 at 40 CFR part 63, appendix A.

(d) *Halogenated vent stream control requirements.* If you control a vent stream using a boiler, process heater, oxidizer or fuel gas system, you must determine whether the vent stream is halogenated, pursuant to paragraph (c) of this section. If you determine the vent stream is halogenated, you must convey the gas stream exiting the boiler, process heater or oxidizer to a halogen reduction device, such as an absorber meeting the requirements of § 65.740, or other device meeting the requirements of § 65.800, before it is discharged to the atmosphere. You may use a halogen reduction device to reduce the vent stream halogen atom mass emission rate to less than 0.45 kilogram per hour and, thus, make the vent stream nonhalogenated.

(e) *Performance test requirements.* You must conduct a performance test according to the procedures in §§ 65.820 through 65.829. However, you are not required to conduct a performance test if any of the control measures specified in paragraphs (e)(1) through (5) of this section are used.

(1) A control device for which the referencing subpart allows a design evaluation as an alternative to the performance test.

(2) You use a continuous emission monitoring system (CEMS) meeting the requirements in § 65.711 to monitor the performance of the control device that would otherwise require performance testing.

(3) Control measures for which you have received an approved performance test waiver, according to § 65.245 of this chapter.

(4) If a prior performance test was conducted using the same procedures specified in § 65.724(b) for boilers and process heaters, § 65.726(b) for thermal oxidizers, § 65.728(b) for catalytic oxidizers, § 65.740(b) for absorbers, § 65.742(f) for adsorbers regenerated on site, § 65.744(b) for non-regenerative adsorbers, § 65.746(b) for condensers, § 65.748(b) for biofilters, § 65.760(b) for sorbent injection, § 65.762(b) for fabric filters and § 65.800(b) for other control devices, as applicable, and, either no process changes have been made since the test or you can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process changes, you may only use a prior performance test that is less than 5 years old in lieu of a performance test. You must request permission to substitute a prior performance test by application to the Administrator that includes the information specified in § 65.884(f). You must be able to establish appropriate operating limits using the information collected during the prior performance test. If a performance test is waived, you are still subject to any subsequent or periodic performance test requirements.

(5) If you use a condenser and comply with § 65.746.

(f) *Process changes.* If you make a change to process equipment or operating conditions that is expected to affect the operating parameter values of a control device and render the operating limits ineffective as indicators of compliance with the standard, you must conduct a performance test, as specified in paragraph (e) of this section, within 180 days of the date of start-up of the change to establish new operating limits and demonstrate that the changed emission point is in compliance with the applicable emission limit of the referencing subpart. Whenever you make a change, you must report the change, as specified in § 65.884(i).

(g) *Monitoring data averages.* You must calculate monitoring data averages, as specified in § 65.855.

(h) *Recordkeeping.* You must keep up-to-date, readily accessible records of applicable records, as specified in § 65.860.

(i) *Reports.* You must submit reports, as specified in §§ 65.880 through 65.884.

§ 65.703 What parts of my plant does this subpart cover?

This subpart applies to control devices that receive regulated material and that are used to comply with a referencing subpart. This subpart also applies to closed vent systems that route

regulated material to control devices and fuel gas systems that receive regulated material.

§ 65.704 What parts of the General Provisions apply to me?

The General Provisions of 40 CFR parts 60, 61 and 63 apply to this subpart, as specified in subpart H of this part.

§ 65.705 What definitions apply to this subpart?

All terms used in this subpart have the same meaning given in the Clean Air Act and subpart H of this part, unless otherwise specified in the referencing subpart.

Control Devices

§ 65.710 What general monitoring requirements must I meet for control devices?

(a) You must meet the general monitoring requirements of this section for all control devices used to comply with the referencing subpart.

(b) If you choose to use a CEMS to meet the requirements as specified in Table 1 to this subpart, you must comply with the provisions specified in § 65.711. If you choose to use a continuous parameter monitoring system (CPMS) to meet the requirements, as specified in Table 2 to this subpart, you must comply with the provisions specified in § 65.712.

(c) You are not required to operate CEMS or CPMS during periods of no flow, or no flow of regulated material to the control device; however, if flow could be intermittent, you must install a flow indicator to identify periods of flow/no flow at the inlet or outlet of the control device. You must keep records of periods of flow/no flow, or no flow of regulated material to the control device, as specified in § 65.860(i). Flow indicators used only to identify periods of flow and no flow are not subject to the requirements of § 65.712. However, you must perform a flow meter verification check annually. You must perform the annual verification check for at least two points, one at the instrument's zero and the other at the instrument's span.

(d) All monitoring equipment must be capable of providing a continuous record.

(e) A deviation means any of the cases listed in paragraphs (e)(1) through (5) of this section. Monitoring data are not required to be collected during periods of non-operation of the process unit or portion thereof (resulting in cessation of the emissions to which monitoring applies).

(1) Periods of excess emissions, which are those periods when the daily or block average value from a CEMS, reduced to the units of the emissions standards, as specified in § 65.711(j), exceeds an emission limit specified in the referencing subpart.

(2) Operating parameter exceedances, which are those periods when the daily or block average value of one or more monitored operating parameters is outside the operating limit established under this rule.

(3) Any discharges to the atmosphere through a bypass line.

(4) Any period when you route regulated materials to a monitored emission point that you do not collect data using your CEMS, CPMS or other required non-continuous monitoring, as applicable. This does not include periods of normally scheduled quality assurance activities in your CEMS performance evaluation and monitoring plan or CPMS monitoring plan that require the instrument to be offline (*e.g.,* during calibration checks).

(5) Any period when you route regulated emissions to a monitored emission point when the continuous monitoring system (CMS) is not operating properly or is out of control, as specified in § 65.711(i) or § 65.712(d).

§ 65.711 What are the requirements for continuous emission monitoring systems (CEMS)?

(a) *General.* You must comply with the requirements of this section for each CEMS unless the Administrator specifies or approves a change (minor, intermediate or major) in methodology or an alternative for the specified monitoring requirements and procedures, as provided in § 65.240.

(b) *Operation of CEMS.* You must install, maintain and operate each CEMS, as specified in paragraphs (b)(1) through (11) of this section.

(1) Install each CEMS according to the procedures contained in the applicable performance specification(s) listed in paragraph (h) of this section. Locate the sampling probe or other interface at a measurement location relative to each regulated process unit such that you obtain representative measurements of emissions from the regulated source (*e.g.,* on or downstream of the last control device).

(2) When you combine the regulated emissions from two or more regulated emission units before release to the atmosphere, you may install an applicable CEMS for each emissions unit or for the combined emissions stream, provided the monitoring is sufficient to demonstrate compliance with the emission limit for each emissions unit.

(3) If the relevant emission limit is a mass emission standard and the regulated emissions from a regulated emissions unit are released to the atmosphere through more than one emission point, you must install an applicable CEMS at each emission point.

(4) You must ensure the readout (that portion of the CEMS that provides a visual display or record), or other indication of emissions, from any CEMS required for compliance with an emission standard is readily accessible onsite for operational control or inspection by the operator of the source.

(5) You must conduct a CEMS performance evaluation, pursuant to the schedule specified in the referencing subpart, and periodically, as specified in your CEMS performance evaluation and monitoring plan described in paragraph (c) of this section.

(6) All CEMS must complete a minimum of one cycle of operation (sampling, analyzing and data recording) for each successive 15-minute period.

(7) Except for maintenance periods, instrument adjustments or checks to maintain precision and accuracy, calibration checks, and zero and span adjustments, you must operate all CEMS and collect data continuously when you route regulated emissions to the monitored emission point.

(8) Upon submittal of the CEMS performance evaluation and monitoring plan to the Administrator for approval, you must operate and maintain each CEMS according to the CEMS performance evaluation and monitoring plan specified in paragraph (c) of this section.

(9) You must modify the CEMS performance evaluation and monitoring plan to incorporate the Administrator's comments and resubmit the plan for approval to the Administrator within 30 days of receiving the Administrator's comments. Upon re-submittal to the Administrator for approval, you must operate and maintain each CEMS in conformance with the revised CEMS performance evaluation and monitoring plan.

(10) For each CEMS, you must comply with the procedures for out-of-control periods described in paragraph (i) of this section.

(11) You must reduce data from each CEMS, as specified in paragraph (j) of this section.

(c) *Quality control program.* You must develop and implement a CEMS quality control program documented in a CEMS performance evaluation and monitoring

plan. You must include in the CEMS performance evaluation and monitoring plan the information specified in paragraphs (c)(1) through (3) of this section.

(1) Routine quality control and assurance procedures that address the requirements of paragraph (d) of this section.

(2) CEMS evaluation procedures that meet the requirements of paragraph (e) of this section.

(3) Additional information, as listed in paragraph (f) of this section.

(d) *CEMS performance evaluation and monitoring plan contents—routine quality control and assurance procedures.* In the CEMS performance evaluation and monitoring plan, you must include a description of the procedures listed in paragraphs (d)(1) through (6) of this section and a schedule for conducting these procedures. The routine procedures must provide an assessment of CEMS performance and must be consistent with and incorporate applicable provisions of the procedures specified in paragraph (g) of this section.

(1) Initial and subsequent calibration of the CEMS and acceptance criteria.

(2) Determination and adjustment of the calibration drift of the CEMS.

(3) Preventive maintenance of the CEMS, including spare parts inventory.

(4) Data recording, calculations and reporting;

(5) Accuracy audit procedures, including sampling and analysis methods.

(6) Program of corrective action for a CEMS that is not operating properly or is out-of-control.

(e) *CEMS performance evaluation and monitoring plan contents—CEMS evaluation.* In the CEMS performance evaluation and monitoring plan, you must include the information listed in paragraphs (e)(1) through (6) of this section.

(1) A description of the applicable CEMS evaluation procedure specified in paragraph (h) of this section and the site-specific details and procedures necessary to describe the applicable procedure for your specific operation.

(2) The evaluation program objectives.

(3) Acceptance criteria.

(4) An evaluation program summary.

(5) Data quality objectives. (The pre-evaluation expectations of precision, accuracy and completeness of data.)

(6) Conditions that would trigger a CEMS evaluation, which must include, at a minimum, a newly installed CEMS; an existing CEMS that is newly used to demonstrate compliance with a referencing subpart and has not previously had a CEMS evaluation; a process change that is expected to affect the performance of the CEMS; and the Administrator's request for a performance evaluation under section 114 of the Clean Air Act. A CEMS that is newly used to demonstrate compliance with a referencing subpart that has previously had a CEMS evaluation, as specified in this paragraph (e) of this section, and has followed routine quality assurance procedures, as specified in paragraph (d) of this section, since the previous CEMS evaluation, does not trigger an additional CEMS evaluation unless a change is also made that is expected to affect the performance of the CEMS.

(f) *CEMS performance evaluation and monitoring plan contents—additional information.* In the CEMS performance evaluation and monitoring plan, you must include information that provides background about the source and monitoring equipment, as specified in paragraphs (f)(1) through (4) of this section.

(1) Identification of the pollutant being monitored by the CEMS and the expected concentrations, including worst case concentrations at normal operation and during possible process upsets.

(2) Description of the monitoring equipment, including the information specified in paragraphs (f)(2)(i) through (vii) of this section.

(i) Manufacturer and model number for all monitoring equipment components.

(ii) Performance specifications, as provided by the manufacturer and any differences expected for your installation and operation.

(iii) Location of the CMS sampling probe or other interface and a justification of how the location meets the requirements of paragraph (b)(1) of this section.

(iv) Placement of the CEMS readout, or other indication of emissions, indicating how the location meets the requirements of paragraph (b)(2) of this section.

(v) Span of the analyzer.

(vi) Justification of the selection for the specific monitoring equipment with respect to the pollutant and pollutant concentrations expected.

(vii) Identification of the cycle time for the CEMS, indicating that it meets the requirement of (b)(3) of this section.

(3) Description of the data collection and reduction systems, including the information specified in paragraphs (f)(3)(i) through (iv) of this section.

(i) A copy of the data acquisition system algorithm used to reduce the measured data into the reportable form of the standard and calculate the applicable averages.

(ii) Identification of whether the algorithm excludes data collected during CEMS breakdowns, out-of-control periods, repairs, maintenance periods, instrument adjustments or checks to maintain precision and accuracy, calibration checks, and zero (low-level), mid-level (if applicable) and high-level adjustments.

(iii) If the data acquisition algorithm does not exclude data collected during CEMS breakdowns, out-of-control periods, repairs, maintenance periods, instrument adjustments or checks to maintain precision and accuracy, calibration checks, and zero (low-level), mid-level (if applicable) and high-level adjustments, then include a description of your procedure for excluding this data when the averages calculated, as specified in § 65.855, are determined.

(iv) If the measured data are converted to the reportable form of the standard and/or averages calculated manually, documentation of the calculation procedure.

(4) Identification of the applicable EPA performance specification(s) for the CEMS.

(g) *CEMS procedures.* You must operate each CEMS in accordance with each of the applicable procedures in paragraphs (g)(1) through (4) of this section and the CEMS performance evaluation and monitoring plan in paragraph (c) of this section.

(1) Except as provided in paragraphs (g)(2) through (4) of this section, you must comply with procedure 1 at 40 CFR part 60, appendix F. If you operate a CEMS, based on Fourier transform infrared spectroscopy, you must replace the Relative Accuracy Test Audit requirements of procedure 1 with the validation requirements and criteria of sections 11.1.1 and 12.0 of Performance Specification 15 of part 60, appendix B.

(2) If you operate a particulate matter CEMS, you must comply with procedure 2 at 40 CFR part 60, appendix F, instead of procedure 1 at 40 CFR part 60, appendix F.

(3) If you operate a mercury CEMS, you must comply with procedure 5 at 40 CFR part 60, appendix F, instead of procedure 1 at 40 CFR part 60, appendix F.

(4) If you operate a CEMS, meeting Performance Specification 9 or 15 requirements, you must determine the target analyte(s) for calibration using either process knowledge of the vent stream or the presurvey screening procedures in section 16 of Method 18 at 40 CFR part 60, appendix A–6 on the control device outlet stream.

(h) *Certification.* As specified in the CEMS performance evaluation and monitoring plan in paragraph (c) of this section, you must perform a CEMS evaluation and certify your CEMS in accordance with the performance specifications listed in paragraphs (h)(1) through (9) of this section, as specified in paragraphs (h)(10) and (11) of this section, and in accordance with your CEMS performance evaluation and monitoring plan specified in paragraph (c) of this section. Paragraph (h)(12) of this section provides for situations when the performance specifications listed in paragraphs (h)(1) through (9) of this section are not applicable. The performance specifications listed in paragraphs (h)(1) through (11) of this section are found in appendix B of part 60.

(1) For particulate matter, Performance Specification 11.

(2) For hydrogen halides, Performance Specification 15.

(3) For mercury, Performance Specification 12A or 12B.

(4) For sulfur dioxide, Performance Specification 2.

(5) For total hydrocarbons, Performance Specification 8A.

(6) For speciated organic compounds using a gas chromatograph, Performance Specification 9.

(7) For speciated organic compounds using Fourier transform infrared spectroscopy, Performance Specification 15.

(8) For oxygen or carbon dioxide, Performance Specification 3.

(9) For carbon monoxide, Performance Specification 4, if your emission limit is above 200 ppmv, or Performance Specification 4A if your emission limit is equal to or less than 200 ppmv.

(10) If you operate a CEMS meeting Performance Specification 9 or 15, you must determine the target analyte(s) for calibration using either process knowledge of the vent stream or the pre-survey screening procedures in section 16 of Method 18 at 40 CFR part 60, appendix A–6 on the control device outlet stream.

(11) You may only use Performance Specification 15 to measure hydrogen halides if you are not required to include halogens in your measurement or you can demonstrate that there are no halogens in the vent stream.

(12) If you wish to use a CEMS with no applicable Performance Specification, you must submit a request for approval to use an alternate monitoring method according to § 65.240. Your alternative monitoring method request must include the procedures for a CEMS evaluation and other information typically contained in a Performance Specification. This information must also be included in the CEMS performance evaluation and monitoring plan specified on paragraph (d) of this section.

(i) *Out-of-control periods.* For each CEMS, you must comply with the out-of-control procedures described in paragraph (i) of this section when the CEMS is out-of-control, as defined in paragraph (i)(1).

(1) If the conditions in paragraph (i)(1)(i) or (ii) of this section occur, the CEMS is out-of-control.

(i) If the zero (low-level), mid-level (if applicable) or high-level calibration drift exceeds two times the applicable calibration drift specification in the applicable performance specification.

(ii) A CEMS is out of control if the CEMS fails a performance test audit (*e.g.*, cylinder gas audit), relative accuracy test audit or linearity test audit.

(2) When the CEMS is out of control, you must take the necessary corrective action and repeat all necessary tests that indicate the system is out of control. You must take corrective action and conduct retesting until the performance requirements are below the applicable limits. The beginning of the out-of-control period is the hour you conduct a performance check (*e.g.*, calibration drift) that indicates an exceedance of the performance requirements established in this section. The end of the out-of-control period is the hour following the completion of corrective action and successful demonstration that the system is within the allowable limits. You must not use data recorded during periods the CEMS is out of control in data averages and calculations, used to report emissions or operating levels, as specified in § 65.855(b).

(j) *CEMS data reduction.* You must reduce data from a CEMS, as specified in paragraphs (j)(1) through (4) of this section.

(1) Convert all CEMS emission data into units of the emission limit of the referencing subpart for reporting purposes using the conversion procedures specified in that subpart. After conversion into units of the emission limit, you may round the data to the same number of significant digits as used in that emission limit.

(2) If a referencing subpart specifies an emission standard in a specific percent oxygen, you must correct the concentrations, as measured by the CEMS in accordance with § 65.826(b).

(3) Calculate averages, as specified in § 65.855.

(4) Record the CEMS data, as specified in § 65.860.

(k) The CEMS performance evaluation and monitoring plan must be submitted for approval to the Administrator 60 days before the CEMS evaluation is to be conducted.

(l) If you are not proposing any alternative monitoring methods and are intending to demonstrate compliance using the monitoring method(s) specified in this section, you do not have to wait for approval of your CEMS performance evaluation and monitoring plan before conducting the CEMS evaluation or before following the other procedures of the CEMS performance evaluation and monitoring plan.

(m) If you are proposing an alternative monitoring method, follow the procedures in § 65.240.

§ 65.712 What are the requirements for continuous parameter monitoring systems (CPMS)?

(a) *General.* You must comply with the requirements of this section for each CPMS unless the Administrator specifies or approves a change (minor, intermediate or major) in methodology or an alternative for the specified monitoring requirements and procedures, as provided in § 65.240.

(b) *Operation of CPMS.* You must install, maintain and operate each CPMS, as specified in paragraphs (b)(1) through (11) of this section.

(1) Install and locate each CPMS sampling probe or other interface at a measurement location relative to each regulated process unit or control device being monitored such that you obtain representative measurements of the operating parameter from the regulated source or control device (*e.g.,* on or downstream of the last control device).

(2) You must ensure the readout (that portion of the CPMS that provides a visual display or record), or other indication of the monitored operating parameter from any CPMS required for compliance is readily accessible onsite for operational control or inspection by the operator of the source.

(3) All CPMS must complete a minimum of one cycle of operation (sampling, analyzing and data recording) for each successive 15-minute period.

(4) Except for maintenance periods, instrument adjustments or checks to maintain precision and accuracy, calibration checks, and zero and span adjustments, you must operate all CPMS and collect data continuously when you route regulated emissions to the monitored emission point.

(5) Upon submittal of the CPMS monitoring plan to the Administrator for approval, you must operate and maintain each CPMS according to the

CPMS monitoring plan specified in paragraph (c) of this section.

(6) You must modify the CPMS monitoring plan to incorporate the Administrator's comments and resubmit the plan for approval to the Administrator within 30 days of receiving the Administrator's comments. Upon re-submittal to the Administrator for approval, you must operate and maintain each CPMS in conformance with the revised CPMS monitoring plan.

(7) For each CPMS, you must comply with the out-of-control procedures described in paragraphs (d) of this section.

(8) You must reduce data from a CPMS, as specified in paragraphs (e) of this section.

(9) All monitoring equipment must meet the minimum accuracy, calibration and quality control requirements specified in Table 4 to this subpart.

(10) Your CPMS must be capable of measuring the appropriate parameter over a range that extends from a value that is at least 20 percent less than the lowest value that you expect your CPMS to measure, to a value that is at least 20 percent greater than the highest value that you expect your CPMS to measure. The data recording system associated with each CPMS must have a resolution that is equal to or better than one-half of the required system accuracy.

(11) All CPMS must be installed, operational and calibrated, as specified in paragraph (b) of this section, within 24 hours before conducting the performance test or, if a performance test is not required, prior to the compliance date. Subsequent calibrations must be conducted, as specified in the CPMS monitoring plan, as specified in paragraph (c) of this section.

(c) *Quality control program.* You must develop and implement a CPMS quality control program documented in a CPMS monitoring plan. The CPMS monitoring plan must contain the information listed in paragraphs (c)(1) through (5) of this section.

(1) The information specified in § 65.225(g).

(2) Identification of the parameter to be monitored by the CPMS and the expected parameter range, including worst case and normal operation.

(3) Description of the monitoring equipment, including the information specified in (c)(3)(i) through (viii) of this section.

(i) Manufacturer and model number for all monitoring equipment components.

(ii) Performance specifications, as provided by the manufacturer, and any differences expected for your installation and operation.

(iii) The location of the CMS sampling probe or other interface and a justification of how the location meets the requirements of paragraph (b)(1) of this section.

(iv) Placement of the CPMS readout, or other indication of parameter values, indicating how the location meets the requirements of paragraph (b)(2) of this section.

(v) Span of the analyzer.

(vi) Identify the parameter detected by the parametric signal analyzer and the algorithm used to convert these values into the operating parameter monitored to demonstrate compliance, if the parameter detected is different from the operating parameter monitored.

(vii) Justification for the selection of the specific monitoring equipment with respect to the parameter and expected parameter values.

(viii) Identify the cycle time for the CPMS.

(4) Description of the data collection and reduction systems, including the information specified in paragraphs (c)(4)(i) through (iv) of this section.

(i) A copy of the data acquisition system algorithm used to reduce the measured data into the reportable form of the standard and calculate the applicable averages.

(ii) Identification of whether the algorithm excludes data collected during CPMS breakdowns, out-of-control periods, repairs, maintenance periods, instrument adjustments or checks to maintain precision and accuracy, calibration checks, and zero (low-level), mid-level (if applicable) and high-level adjustments.

(iii) If the data acquisition algorithm does not exclude data collected during CEMS breakdowns, out-of-control periods, repairs, maintenance periods, instrument adjustments or checks to maintain precision and accuracy, calibration checks, and zero (low-level), mid-level (if applicable) and high-level adjustments, then include a description of your procedure for excluding this data when the averages calculated, as specified in § 65.855 are determined.

(iv) If the measured data are converted to the reportable form of the standard and/or averages calculated manually, documentation of the calculation procedure.

(5) Routine quality control and assurance procedures, including descriptions of the procedures listed in paragraphs (c)(5)(i) through (vi) of this section and a schedule for conducting these procedures. The routine procedures must provide an assessment of CPMS performance.

(i) Initial and subsequent calibration of the CPMS and acceptance criteria.

(ii) Determination and adjustment of the calibration drift of the CPMS.

(iii) Daily checks for indications that the system is responding. If the CPMS system includes an internal system check, you may use the results to verify the system is responding, as long as you check the internal system results daily for proper operation and the results are recorded.

(iv) Preventive maintenance of the CPMS, including spare parts inventory.

(v) Data recording, calculations and reporting.

(vi) Program of corrective action for a CPMS that is not operating properly.

(d) *Out-of-control periods.* For each CPMS, you must comply with the out-of-control procedures described in paragraphs (d)(1) and (2) of this section.

(1) A CPMS is out-of-control if the zero (low-level), mid-level (if applicable) or high-level calibration drift exceeds two times the accuracy requirement of Table 4 of this subpart.

(2) When the CPMS is out of control, you must take the necessary corrective action and repeat all necessary tests that indicate the system is out of control. You must take corrective action and conduct retesting until the performance requirements are below the applicable limits. The beginning of the out-of-control period is the hour you conduct a performance check (*e.g.,* calibration drift) that indicates an exceedance of the performance requirements established in this section. The end of the out-of-control period is the hour following the completion of corrective action and successful demonstration that the system is within the allowable limits. You must not use data recorded during periods the CPMS is out of control in data averages and calculations, used to report emissions or operating levels, as specified in § 65.855(b).

(e) *CPMS data reduction.* You must reduce data from a CPMS, as specified in paragraphs (e)(1) through (4) of this section.

(1) You may round the data to the same number of significant digits, as used in that emission limit.

(2) Periods of non-operation of the process unit (or portion thereof), resulting in cessation of the emissions to which the monitoring applies must not be included in daily averages.

(3) Calculate averages, as specified in § 65.855.

(4) The data from a CPMS must be recorded, as specified in § 65.860.

(f) *Monitoring plan submittal date.* The CPMS monitoring plan must be submitted for approval to the

Administrator 60 days before the initial CPMS evaluation is to be conducted.

(g) *Implementing the monitoring plan.* If you are not proposing any alternative monitoring methods and are intending to demonstrate compliance using the monitoring method(s) specified in this section, you do not have to wait for approval of your CPMS monitoring plan before conducting the performance test or before following the procedures of the CPMS monitoring plan.

(h) *Alternative monitoring method.* If you are proposing an alternative monitoring method, follow the procedures in § 65.240.

§ 65.713 How do I establish my operating limits?

You must establish operating limits for operating parameters required to be monitored by this subpart by following the requirements in this section or you may request approval of monitoring alternatives, as specified in § 65.884(h).

(a) You must establish the operating limit for each operating parameter for each control device, based on the operating parameter values recorded during the performance test, and may be supplemented by engineering assessments and/or manufacturer's recommendations. Performance testing is not required to be conducted over the entire range of allowed operating parameter values.

(b) The established operating limit must represent the conditions for which the control device is meeting the specified emission limit of the referencing subpart.

(c) You must establish your operating limit as an operating parameter range, minimum operating parameter level or maximum operating parameter level, as specified in Table 3 to this subpart, as applicable. Where this subpart does not specify which format to use for your operating limit (*e.g.,* operating range, or minimum/maximum operating levels), you must determine which format best establishes proper operation of the control device such that the control device is meeting the specified emission limit of the referencing subpart.

(d) The operating limit may be based on ranges or limits previously established under a referencing subpart. If a performance test is not required for a control device and, except as specified in § 65.748(b) for biofilters, the operating limit may be based on engineering assessments and/or manufacturer's recommendations included in the required design evaluation.

(e) For batch processes, you may establish operating limits for individual emission episodes, including each distinct episode of vent stream emissions, if applicable. If you elect to establish separate operating limits for different emission episodes within a batch process, then you must comply with the provisions in paragraphs (e)(1) and (2) of this section.

(1) Maintain a daily schedule or log of operating scenarios for batch processes according to § 65.860(f)(1).

(2) Provide rationale for each operating limit for each emission episode in a batch pre-compliance report, as specified in § 65.884(g). You must also report the rationale according to § 65.884(j).

§ 65.720 What requirements must I meet for closed vent systems?

(a) *General.* If you operate a closed vent system that collects regulated material from a regulated source, you must meet the applicable requirements of this section. You must also meet the applicable requirements of subpart J of this part.

(b) *Collection of emissions.* Each closed vent system must be designed and operated to collect the regulated material vapors from the emission point, and to route the collected vapors to a control device with no release to the atmosphere through bypass lines.

(c) *Bypass lines.* Use of the bypass at any time to divert a regulated vent stream is an emissions standards deviation for all pollutants regulated by the referencing subpart. The use of the bypass during a performance test invalidates the performance test. You must comply with the provisions of either paragraphs (c)(1) or (2) of this section for each closed vent system that contains bypass lines that could divert a vent stream to the atmosphere.

(1) *Bypass line flow indicator.* Install, maintain and operate a CPMS for flow, as specified in paragraphs (c)(1)(i) and (ii) of this section.

(i) Install a CPMS for flow at the entrance to any bypass line. The CPMS must record the volume of the gas stream that bypassed the control device.

(ii) Equip the CPMS for flow with an alarm system that will alert an operator immediately and automatically when flow is detected in the bypass line. Locate the alarm such that an operator can easily detect and recognize the alert.

(2) *Bypass line valve configuration.* Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. You must visually inspect the seal or closure mechanism at least once every month to verify that the valve is maintained in the non-diverting position, and the vent stream is not diverted through the bypass line.

(d) *Bypass records.* For each closed vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, or cause air intrusion into the control device, you must keep a record of the information specified in either paragraph (d)(1) or (2) of this section, as applicable.

(1) You must maintain records of any alarms triggered because flow was detected in the bypass line, including the date and time the alarm was triggered and the duration of the flow in the bypass line. You must also maintain records of all periods when the vent stream is diverted from the control device or air intrudes into the control device. You must include an estimate of the volume of gas, the concentration of regulated material in the gas and the resulting emissions of regulated material that bypassed the control device.

(2) Where a seal mechanism is used to comply with paragraph (c)(2) of this section, hourly records of flow are not required. In such cases, you must record the date that you complete the monthly visual inspection of the seals or closure mechanisms. You must also record the occurrence of all periods when the seal or closure mechanism is broken, the bypass line valve position has changed or the key for a lock-and-key type lock has been checked out. You must include an estimate of the volume of gas, the concentration of regulated material in the gas and the resulting emissions of regulated material that bypassed the control device.

§ 65.724 What requirements must I meet for small boilers and process heaters?

(a) *Small boiler or process heater monitoring.* You must install the monitoring equipment and meet the requirements specified for small boilers and process heaters in either Table 1 or Table 2 to this subpart, even if the small boiler or process heater is part of a fuel gas system.

(b) *Small boiler or process heater performance test.* You must conduct a performance test, pursuant to §§ 65.820 through 65.829, and paragraphs (b)(1) and (2) of this section, even if the small boiler or process heater is part of a fuel gas system, unless one of the provisions in paragraph (c) of this section is met.

(1) When demonstrating compliance with a percent reduction emission limit in a referencing subpart, you must determine the weight-percent reduction of organic regulated material or total organic compounds (minus methane and ethane) across the device by comparing the total organic compounds (minus methane and ethane) or organic regulated material in all combusted vent

streams and primary and secondary fuels with the total organic compounds (minus methane and ethane) or organic regulated material exiting the combustion device, respectively.

(2) When determining the weight-percent reduction, you must locate the sampling sites for the measurement of total organic regulated material or total organic compound (minus methane and ethane) concentrations, as applicable, at the inlet of the small boiler or process heater such that all vent streams and primary and secondary fuels introduced into the boiler or process heater are included.

(c) *Small boiler or process heater performance test exemptions.* You are not required to conduct a performance test if any of the general control measures specified in § 65.702(e) are used. You are also not required to conduct a performance test if your small boiler or process heater burns hazardous waste and has certified compliance with the requirements of part 63, subpart EEE of this chapter by conducting comprehensive performance tests; you have submitted to the Administrator a notification of compliance under §§ 63.1207(j) and 63.1210(d) documenting compliance with the requirements of part 63, subpart EEE of this chapter; and you comply with these requirements at all times, even when you burn non-hazardous waste.

(d) *Boiler or process heater design evaluation.* If a referencing subpart allows you to conduct a design evaluation in lieu of a performance test, and you chose to do a design evaluation, you must meet the requirements of § 65.850. The design evaluation must demonstrate that the small boiler or process heater meets the applicable emission limit; consider the auto ignition temperature of the regulated material and the vent stream flow rate; establish the design minimum and average flame zone temperatures and combustion zone residence time; and describe the method and location where the vent stream is introduced into the flame zone.

(e) *Boiler or process heater performance test records.* If you have chosen to monitor operating parameters in Table 2 to this subpart, you must record the operating parameters, as specified in paragraphs (e)(1) and (2) of this section, as applicable, measured during each performance test conducted, pursuant to §§ 65.820 through 65.829.

(1) Record the fire box temperature measured during the performance test at least every 15 minutes and average the temperature over each run of the performance test.

(2) Record a location description of the vent stream junction into the boiler or process heater.

(f) *Boiler or process heater monitoring records.* You must keep the records specified in paragraphs (f)(1) and (2) of this section up-to-date and readily accessible, as applicable.

(1) Continuous records of the control device operating parameters or emissions specified to be monitored under paragraph (a) of this section, as applicable.

(2) Records of the daily average value, or for batch operations, operating block average value, of each continuously monitored operating parameter or records of continuous emissions according to the procedures specified in § 65.860(a).

§ 65.726 What monitoring requirements must I meet for thermal oxidizers?

(a) *Thermal oxidizer monitoring.* You must install the monitoring equipment and meet the requirements specified for thermal oxidizers in either Table 1 or 2 to this subpart.

(b) *Thermal oxidizer performance test.* You must conduct a performance test, pursuant to §§ 65.820 through 65.829, unless any of the general control measures specified in § 65.702(e) are used. You are also not required to conduct a performance test if your thermal oxidizer burns hazardous waste and has certified compliance with the requirements of part 63, subpart EEE of this chapter by conducting comprehensive performance tests; you have submitted to the Administrator a notification of compliance under §§ 63.1207(j) and 63.1210(d) documenting compliance with the requirements of part 63, subpart EEE of this chapter; and you comply with these requirements at all times, even when you burn non-hazardous waste.

(c) *Thermal oxidizer design evaluation.* If a referencing subpart allows you to conduct a design evaluation in lieu of a performance test, and you chose to do a design evaluation, you must meet the requirements of § 65.850 and, in demonstrating that the oxidizer meets the applicable emission limit, the design evaluation must consider the auto-ignition temperature of the regulated material and the vent stream flow rate and establish the design minimum and average temperature in the combustion zone and the combustion zone residence time.

(d) *Thermal oxidizer performance test records.* If you have chosen to monitor operating parameters in Table 2 to this subpart, you must record the fire box temperature measured during each performance test conducted, pursuant to §§ 65.820 through 65.829. Record the fire box temperature at least every 15 minutes and average the temperature over each run of the performance test.

(e) *Thermal oxidizer monitoring records.* You must keep the records specified in paragraphs (e)(1) and (2) of this section up-to-date and readily accessible, as applicable.

(1) Continuous records of the control device operating parameters or emissions specified to be monitored under paragraph (a) of this section, as applicable.

(2) Records of the daily average value, or for batch operations, operating block average value, of each continuously monitored operating parameter or records of continuous emissions according to the procedures specified in § 65.860(a).

§ 65.728 What monitoring requirements must I meet for catalytic oxidizers?

(a) *Catalytic oxidizer monitoring.* You must install the monitoring equipment and meet the requirements specified for catalytic oxidizers in either Table 1 or 2 to this subpart. For catalytic oxidizers for which you have selected to monitor temperature at the inlet of the catalyst bed, as specified in Table 2 to this subpart, you must conduct catalyst checks according to paragraphs (a)(1) and (2) of this section.

(1) You must conduct sampling and analysis of the catalyst and meet the requirements of paragraphs (a)(1)(i) through (iv) of this section.

(i) You must determine a schedule for conducting sampling and analysis of the catalyst, based upon the expected degradation rate of the catalyst, and following the manufacturer's or catalyst supplier's recommended procedures for sampling and analysis.

(ii) The catalyst sampling and analysis schedule must be included in the performance test plan specified in § 65.820(b) and approved by the Administrator.

(iii) If results from the catalyst sampling and analysis indicate that your catalyst will become inactive in 18 months or less, you must replace the catalyst bed or take other corrective action consistent with the manufacturer's recommendations within 3 months before the catalyst is anticipated to become inactive or within half the time available between receiving the catalyst activity report and when the catalyst is expected to become inactive, whichever is less. Additionally, you must determine if a more frequent catalyst replacement schedule is necessary.

(iv) If you replace the catalyst bed with a catalyst different from the

catalyst used during the performance test, you must conduct a new performance test according to paragraph (b) of this section.

(2) You must conduct annual internal inspections of the catalyst bed to check for fouling, plugging, mechanical breakdown, channeling, abrasion and settling, and follow the procedures specified in paragraph (a)(2)(i) through (iii) of this section.

(i) If indications of fouling, plugging, mechanical breakdown, channeling, abrasion or settling are found during the internal inspection of the catalyst, you must replace the catalyst bed or take other corrective action consistent with the manufacturer's recommendations.

(ii) If you find any of these issues during the annual inspection, then you must increase your inspection frequency to semi-annual. You must increase the inspection frequency from semi-annual to quarterly, and quarterly to monthly, if you find any issues requiring corrective action during the semi-annual or quarterly inspection. You may return the inspection frequency to the next less stringent frequency level when no issues are found during an inspection.

(iii) If you replace the catalyst bed with a catalyst different from the catalyst used during the performance test, you must conduct a new performance test according to paragraph (b) of this section.

(b) *Catalytic oxidizer performance test.* You must conduct a performance test, pursuant to §§ 65.820 through 65.829, unless any of the general control measures specified in § 65.702(e) are used. You are also not required to conduct a performance test if your catalytic oxidizer burns hazardous waste and has certified compliance with the requirements of part 63, subpart EEE of this chapter by conducting comprehensive performance tests; you have submitted to the Administrator a notification of compliance under §§ 63.1207(j) and 63.1210(d) documenting compliance with the requirements of part 63, subpart EEE of this chapter; and you comply with these requirements at all times, even when you burn non-hazardous waste.

(c) *Catalytic oxidizer design evaluation.* If a referencing subpart allows you to conduct a design evaluation in lieu of a performance test, and you chose to do a design evaluation, you must meet the requirements of § 65.850 and, in demonstrating that the oxidizer meets the applicable emission limit, the design evaluation must consider the vent stream flow rate and you must establish the design minimum and average temperatures across the catalyst bed inlet and outlet.

(d) *Catalytic oxidizer performance test records.* If you have chosen to monitor operating parameters in Table 2 to this subpart, you must record the upstream and downstream temperatures and the temperature difference across the catalyst bed measured during each performance test conducted, pursuant to §§ 65.820 through 65.829. Record the upstream and downstream temperatures and the temperature difference across the catalyst bed at least every 15 minutes and average each temperature and temperature differential over each run of the performance test.

(e) *Catalytic oxidizer monitoring records.* You must keep the records specified in paragraphs (e)(1) and (2) of this section up-to-date and readily accessible, as applicable.

(1) Continuous records of the control device operating parameters or emissions specified to be monitored under paragraph (a) of this section, as applicable.

(2) Records of the daily average value, or for batch operations, operating block average value, of each continuously monitored operating parameter or records of continuous emissions according to the procedures specified in § 65.860(a).

(f) *Catalytic oxidizer other records.* For catalytic oxidizers for which you have selected the monitoring specified in Table 2 to this subpart, you must also maintain records of the results of the catalyst sampling and inspections required by paragraphs (a)(1) and (2) of this section, including any subsequent corrective actions taken.

§ 65.732 What monitoring requirements must I meet for fuel gas systems?

(a) You must submit a statement that the emission stream is connected to the fuel gas system in the Notification of Compliance Status Report, as required, pursuant to § 65.880(b).

(b) You must meet the requirements of subpart J of this part for all components of a fuel gas system.

(c) If you have small boilers or process heaters that are part of a fuel gas system, you must also comply with the provisions of § 65.724 for the small boilers or process heaters.

(d) You must not route halogenated vent streams to a fuel gas system unless the requirements of § 65.702(d) are met.

§ 65.740 What monitoring requirements must I meet for absorbers?

(a) *Absorber monitoring.* You must install the monitoring equipment and meet the requirements specified for absorbers in either Table 1 or 2 to this subpart.

(b) *Absorber performance test.* You must conduct a performance test, pursuant to §§ 65.820 through 65.829, unless any of the general control measures specified in § 65.702(e) are used.

(c) *Absorber design evaluation.* If a referencing subpart allows you to conduct a design evaluation in lieu of a performance test, and you chose to do a design evaluation, you must meet the requirements of § 65.850 and, in demonstrating that the absorber meets the applicable emission limit, address the characteristics specified in paragraphs (c)(1) and (2) of this section, as applicable.

(1) For an absorber, the design evaluation must consider the vent stream composition, constituent concentrations, liquid-to-gas ratio, absorber liquid flow rate and concentration, temperature, pressure drop and the reaction kinetics or absorption characteristics of the constituents with the scrubbing liquid. The design evaluation must establish the design exhaust vent stream organic compound concentration level.

(2) For tray and packed column absorbers, the design evaluation must consider the characteristics specified in paragraph (c)(1) of this section, in addition to type and total number of theoretical and actual trays, type and total surface area of packing for the entire column and type and total surface area for individual packed sections if the column contains more than one packed section.

(d) *Absorber performance test records.* If you have chosen to monitor operating parameters in Table 2 to this subpart, you must keep readily accessible records of the data specified in paragraphs (d)(1) and (2) of this section, as applicable, measured during each performance test conducted, pursuant to §§ 65.820 through 65.829.

(1) The absorber influent liquid flow rate or liquid-to-gas ratio measured during the performance test. Record the influent liquid flow rate or liquid-to-gas ratio at least every 15 minutes and average the flow rate or liquid-to-gas ratio over each run of the performance test.

(2) If applicable, the pressure drop through the absorber, the pH of the absorber liquid effluent, exit gas temperature, inlet gas temperature, specific gravity, liquid feed pressure, oxidation chemical flow rate and/or the oxidation chemical strength of the absorber liquid influent measured during the performance test. Record the pressure drop through the absorber, the pH of the absorber liquid effluent, exit gas temperature, inlet gas temperature, specific gravity, liquid feed pressure, oxidation chemical flow rate and/or the

oxidation chemical strength of the absorber liquid influent at least every 15 minutes and average each operating parameter over each run of the performance test.

(e) *Absorber monitoring records.* You must keep the records specified in paragraphs (e)(1) and (2) of this section up-to-date and readily accessible, as applicable.

(1) Continuous records of the control device operating parameters or emissions specified to be monitored under paragraph (a) of this section, as applicable.

(2) Records of the daily average value, or for batch operations, operating block average value, of each continuously monitored operating parameter or records of continuous emissions according to the procedures specified in paragraph § 65.860(a).

§ 65.742 What monitoring requirements must I meet for adsorbers regenerated onsite?

(a) *General.* If you use regenerative adsorption systems that you regenerate onsite, you must treat the regulated materials extracted from the adsorption system as process wastewater or process vents subject to control levels required by the referencing subpart.

(b) *Regenerative adsorber monitoring.* You must install the monitoring equipment and conduct the monitoring, as specified in either Table 1 or Table 2 to this subpart for regenerative adsorption systems that you regenerate onsite. For regenerative adsorbers, except those monitored with CEMS, you must also conduct the checks specified in paragraphs (c) and (d) of this section, include in your monitoring plan required in § 65.712(c) your plans for complying with paragraph (d) of this section and develop a corrective action plan, as specified in paragraph (e) of this section.

(c) *Regenerative adsorber valve and cycle verification.* For regenerative adsorbers, except those monitored with CEMS, you must perform a verification of the adsorber during each day of operation. The verification must be through visual observation or through an automated alarm or shutdown system that monitors and records system operational parameters. The verification must confirm that the adsorber is operating with proper valve sequencing and cycle time.

(d) *Regenerative adsorber weekly measurements.* For regenerative adsorbers, except those monitored with CEMS, you must conduct weekly measurements of each adsorber bed outlet volatile organic compounds or regulated materials concentration over the last 5 minutes of an adsorption cycle using the methods and procedures in paragraph (d)(1) of this section. If the measured concentration is greater than the maximum normal concentration established in paragraph (d)(2) of this section, you must take corrective action, as specified in the corrective action plan required in paragraph (e) of this section.

(1) You must measure the concentration using the method that you used to establish the maximum normal concentration, and the method must be one of the methods specified in paragraphs (d)(1)(i) through (iii) of this section. You must use Method 1 or 1A at 40 CFR part 60, appendix A–1 to select the sampling location, which should be at the centrally located 10-percent area of the stack or sample port cross-section.

(i) Use chromatographic analysis by using Method 18 at 40 CFR part 60, appendix A. Calibrate the instrument following the procedures described in EPA Method 18 using a calibration gas or gas mixture containing the compounds present in the adsorber vent gas that can be measured by the method.

(ii) Use a portable analyzer, in accordance with Method 21 at 40 CFR part 60, appendix A–7, for open-ended lines. Where EPA Method 21 uses the term ''leak definition,'' you must substitute the term ''maximum normal concentration.'' Calibrate the instrument following the procedures described in EPA Method 21 using one of the calibration gases specified in paragraphs (d)(1)(ii)(A) through (D) of this section.

(A) A calibration gas or gas mixture representative of the normal compound(s) present in the adsorber vent gas.

(B) Propane.

(C) Methane.

(D) Isobutylene.

(iii) Use a flame ionization analyzer by using Method 25A at 40 CFR part 60, appendix A–7. Calibrate the instrument following the procedures described in EPA Method 25A using propane.

(2) You must establish a maximum normal concentration for each adsorber bed vent gas, as specified in paragraphs (d)(2)(i) through (iv) of this section.

(i) For each adsorber bed, measure the outlet volatile organic compound or regulated material concentration weekly, as specified in paragraph (d) of this section, during the last 5 minutes of the adsorption cycle for at least 8 weeks. These measurements must be taken within a 90-day time period.

(ii) Calculate the average outlet concentration for each adsorber bed as the average of the outlet concentrations measured, as required in paragraph (d)(2)(i) of this section.

(iii) Determine maximum normal concentration for each adsorber bed as the 99th percentile confidence level using the one-sided z-statistic test described in Equation 1 of this section.

$$P_{99} = \text{mean} + [(SD)*(t)] \quad \text{(Eq. 1)}$$

Where:

P_{99} = 99th percentile confidence level pollutant concentration in parts per million.

Mean = Arithmetic average of the volatile organic compound or regulated material concentration in the adsorber vent gas, calculated as specified in paragraph (d)(2)(ii) of this section.

SD = Standard deviation of the mean pollutant concentration, calculated as specified in paragraph (d)(2)(ii) of this section.

t = t distribution critical value for 99th percentile (0.01) probability for the appropriate degrees of freedom (number of samples minus one), as obtained from a Distribution Critical Value Table. Use a value of 3 if you have 8 samples.

(iv) You must reestablish your maximum normal concentration for an adsorber bed according to paragraphs (d)(2)(i) through (iii) of this section each time you replace the adsorbent in an adsorber bed.

(e) *Regenerative adsorber corrective action plan.* For regenerative adsorbers, except those monitored with CEMS, you must develop a corrective action plan describing corrective actions to be taken and the timing of those actions when a weekly measurement is above the maximum normal concentration. The plan must specify that you will initiate procedures to identify the cause and take corrective action no later than 8 hours after the weekly measurement. Three consecutive weekly measurements greater than the maximum normal concentration is a deviation. Examples of corrective actions that could be included in your plan are listed in paragraphs (e)(1) through (6) of this section.

(1) Analyze the adsorber inlet vent to determine if inlet concentrations are in the expected range.

(2) Obtain samples at other locations in the system to determine if conditions are normal.

(3) Verify the system temperatures, regeneration stream mass and other operational parameters are within normal ranges.

(4) Test the operation of valves in the system, verify the valves are working as intended and not allowing gas to pass through when closed.

(5) Obtain a sample of the carbon to check for bed poisoning or deterioration of the carbon.

(6) Replace the adsorbent in the adsorber bed with fresh adsorbent.

(f) *Regenerative adsorber performance test.* You must conduct a performance test, pursuant to §§ 65.820 through 65.829, unless any of the general control measures specified in § 65.702(e) are used.

(g) *Regenerative adsorber design evaluation.* If a referencing subpart allows you to conduct a design evaluation in lieu of a performance test, and you chose to do a design evaluation, you must meet the requirements of § 65.850 and, in demonstrating that the absorber meets the applicable emission limit, address the following characteristics, as applicable. For an adsorption system that regenerates the adsorber bed directly onsite in the control device, such as a fixed-bed adsorber, the design evaluation must consider the vent stream mass flow rate, vent stream composition and concentrations, relative humidity, and temperature and must establish the design exhaust vent stream organic compound concentration level, adsorption cycle time, number and capacity of adsorber beds, type and working capacity of adsorbent used for adsorber beds, design total regeneration stream mass flow over the period of each complete adsorber bed regeneration cycle, design adsorber bed temperature after regeneration, design adsorber bed regeneration time and design service life of adsorbent. For vacuum desorption, the lowest required vacuum level and duration needed to assure regeneration of the beds must be considered.

(h) *Regenerative adsorber performance test records.* If you are required to conduct a performance test, you must keep readily accessible records of the data specified in paragraphs (h)(1) through (5) of this section, as applicable, measured during each performance test conducted, pursuant to §§ 65.820 through 65.829.

(1) For non-vacuum regenerative adsorbers, you must record the total regeneration stream mass flow during each adsorber bed regeneration cycle during the period of the performance test, and temperature of the adsorber bed after each regeneration during the period of the performance test (and within 15 minutes of completion of any cooling cycle or cycles).

(2) For non-vacuum regeneration adsorbers, you must record the adsorber bed temperature during regeneration, except for any temperature regulating (cooling or warming to bring bed temperature closer to vent gas temperature) portion of the regeneration cycle.

(3) For vacuum regenerative adsorbers, you must record the vacuum profile over time during each regeneration cycle, and the period of time the vacuum level is below the minimum target level during the period of the performance test.

(4) You must record regeneration frequency and duration during the period of the performance test.

(5) You must record the observations of the verification of the adsorber operation during the period of the performance test.

(i) *Regenerative adsorber monitoring records.* You must keep the records specified in paragraphs (i)(1) and (2) of this section up-to-date and readily accessible, as applicable.

(1) Continuous records of the control device operating parameters and emissions required to be monitored under paragraph (b) of this section, as applicable.

(2) Records of the daily average value, or for batch operations, operating block average value, of each continuously monitored operating parameter or records of continuous emissions according to the procedures specified in § 65.860(a).

(j) *Regenerative adsorber other records.* For regenerative adsorbers, except those monitored with CEMS, you must also maintain records, as specified in paragraphs (j)(1) through (6) of this section.

(1) The corrective action plan required in paragraph (e) of this section.

(2) For the adsorber verification required in paragraph (c) of this section, you must maintain daily records of the verification inspections, including the visual observations and/or any activation of an automated alarm or shutdown system with a written entry into a log book or other permanent form of record.

(3) For the monitoring required in paragraph (d) of this section, you must record the weekly volatile organic compound or regulated material outlet concentration observed over the last 5 minutes of the adsorption cycle for each adsorber bed.

(4) If the measured concentration obtained during the monitoring required in paragraph (d) of this section is greater than the maximum normal concentration for 3 consecutive weekly measurements, you must keep a record of these periods, including the date of the third measurement and the date and time when the concentration becomes less than the maximum normal concentration, or when the adsorbent is replaced.

(5) You must keep records of the measurements used to determine the maximum normal concentrations established for each adsorber bed.

(6) You must keep records of the date and time the adsorbent is replaced and which adsorbent bed was replaced.

§ 65.744 What monitoring requirements must I meet for non-regenerative adsorbers?

(a) *Non-regenerative adsorber monitoring.* You must install the monitoring equipment and meet the requirements specified for non-regenerative adsorbers in either Table 1 or Table 2 to this subpart. Non-regenerative adsorbers include adsorbers that cannot be regenerated and regenerative adsorbers that are regenerated offsite. For non-regenerative adsorbers for which you have selected the monitoring specified in Table 2 to this subpart, you must also comply with paragraph (a)(1) of this section, and you may reduce your monitoring frequency according to paragraphs (a)(2) of this section.

(1) The first adsorber in series must be replaced immediately when breakthrough, as defined in § 65.295, is detected between the first and second adsorber. The original second adsorber (or a fresh canister) will become the new first adsorber and a fresh adsorber will become the second adsorber. For purposes of this paragraph, ''immediately'' means within 8 hours of the detection of a breakthrough for adsorbers of 55 gallons or less, and within 24 hours of the detection of a breakthrough for adsorbers greater than 55 gallons.

(2) In lieu of the daily monitoring, as specified in Table 3 to this subpart, you may reduce your monitoring frequency by establishing the average adsorber bed life. To establish the average adsorber bed life, you must conduct daily monitoring of the outlet volatile organic compound or regulated material concentration of the first adsorber bed in series until breakthrough, as defined in § 65.295, occurs for the first three adsorber bed change-outs. You must re-establish an average adsorber bed life if you change the adsorbent brand or type,

or if any process changes are made that would lead to a lower bed lifetime. You must measure the outlet concentration of volatile organic compounds or outlet concentration of regulated material(s) in accordance with Table 2 to this subpart. Once the average life of the bed is determined, you may conduct ongoing monitoring, as specified in paragraphs (a)(2)(i) and (ii) of this section.

(i) You may conduct monthly monitoring if the adsorbent has more than 2 months of life remaining, based on the average adsorber bed life, as established in paragraph (a)(2) of this section, and the date the adsorbent was last replaced.

(ii) You may conduct weekly monitoring if the adsorbent has more than 2 weeks of life remaining, based on the average adsorber bed life, established in paragraph (a)(2) of this section, and the date the adsorbent was last replaced.

(b) *Non-regenerative adsorber performance test.* You must conduct a performance test, pursuant to §§ 65.820 through 65.829, unless any of the general control measures specified in § 65.702(e) are used.

(c) *Non-regenerative adsorber design evaluation.* If a referencing subpart allows you to conduct a design evaluation in lieu of a performance test, and you chose to do a design evaluation, you must meet the requirements of § 65.850 and, in demonstrating that the absorber meets the applicable emission limit, address the following characteristics, as applicable. For an adsorption system that does not regenerate the adsorber bed directly on site in the control device, such as a carbon canister, the design evaluation must consider the vent stream mass flow rate, vent stream composition and concentrations, relative humidity and temperature and must establish the design exhaust vent stream organic compound concentration level, capacity of adsorber bed, type and working capacity of adsorbent used for the adsorber bed and design adsorbent replacement interval, based on the total adsorbent working capacity of the control device and source operating schedule.

(d) *Non-regenerative adsorber performance test records.* If you are required to conduct a performance test, you must keep readily accessible records of the outlet volatile organic compound or regulated material concentration for each adsorber bed, as provided in Table 2 to this subpart, measured during each performance test conducted, pursuant to §§ 65.820 through 65.829. You must also keep records of the date and time you last replaced the adsorbent.

(e) *Non-regenerative adsorber monitoring records.* You must keep the records specified in paragraphs (e)(1) and (2) of this section up-to-date and readily accessible, as applicable.

(1) Continuous records of the control device operating parameters or emissions specified to be monitored under paragraph (a) of this section, as applicable.

(2) Records of the daily average value, or for batch operations, operating block average value, of each continuously monitored operating parameter or records of continuous emissions according to the procedures specified in § 65.860(a).

(f) *Non-regenerative adsorber other records.* For non-regenerative adsorbers for which you have selected the monitoring specified in Table 2 to this subpart, you must also maintain records, as specified in paragraph (f)(1) and (2) of this section.

(1) Records of the date and time you replace the adsorbent.

(2) If you conduct monitoring less frequently than daily, as specified in Table 2 to this subpart, you must record the average life of the bed.

§ 65.746 What requirements must I meet for condensers?

(a) *Condenser monitoring.* You must install the monitoring equipment and meet the requirements specified for condensers in either Table 1 or Table 2 to this subpart.

(b) *Condenser performance test.* You are not required to conduct a performance test, pursuant to §§ 65.820 through 65.829, unless required by a referencing subpart. Instead, you must conduct a design evaluation, as specified in paragraph (c) of this section, unless you choose to use a CEMS meeting the requirements in § 65.711 to monitor the performance of the condenser.

(c) *Condenser design evaluation.* If you chose to do a design evaluation in lieu of using CEMS meeting the requirements in § 65.711, you must meet the requirements of § 65.850 and, in demonstrating that the condenser meets the applicable emission limit, address the characteristics specified in paragraphs (c)(1) and (2) of this section, as applicable.

(1) The design evaluation must consider the vent stream flow rate, relative humidity, temperature and conditions under which entrainment of the condensing liquid could occur, and must establish the design outlet organic regulated material compound concentration level, design average temperature of the condenser exhaust vent stream and the design average temperatures of the coolant fluid at the condenser inlet and outlet.

(2) You must establish your operating limit for temperature of the condensate receiver and calculate the resulting regulated material concentration using the methodologies in § 65.835(d) to demonstrate compliance with the emissions standard of the referencing subpart.

(d) *Condenser monitoring records.* You must keep the records specified in paragraphs (d)(1) and (2) of this section up-to-date and readily accessible, as applicable.

(1) Continuous records of the control device operating parameters or emissions specified to be monitored under paragraph (a) of this section, as applicable.

(2) Records of the daily average value, or for batch operations, operating block average value, of each continuously monitored operating parameter or records of continuous emissions according to the procedures specified in § 65.860(a).

(e) *Condenser other records.* If you chose to do a design evaluation in lieu of using CEMS meeting the requirements in § 65.711, you must calculate and record the regulated material concentration using continuous and direct measurements of the condensate receiver temperature and the methodology in § 65.835(d).

§ 65.748 What requirements must I meet for biofilters?

(a) *Biofilter monitoring.* You must install the monitoring equipment and meet the requirements specified for biofilters in either Table 1 or Table 2 to this subpart.

(b) *Biofilter performance test.* You must conduct a performance test, pursuant to §§ 65.820 through 65.829, and paragraphs (b)(1) through (3) of this section, unless one of the provisions in paragraph (c) of this section is met.

(1) The operating temperature limit must be based on only the temperatures measured during the performance test; these data may not be supplemented by engineering assessments or manufacturer's recommendations, as otherwise allowed in § 65.713(a).

(2) You may expand the biofilter bed temperature operating limit by conducting a repeat performance test that demonstrates compliance with the percent reduction requirement or outlet concentration limit, as applicable.

(3) You must conduct a repeat performance test using the applicable methods specified in § 65.825 within 2 years following the previous

performance test and within 150 days after each replacement of any portion of the biofilter bed media with a different type of media or each replacement of more than 50 percent (by volume) of the biofilter bed media with the same type of media.

(c) *Biofilter performance test exemptions.* You are not required to conduct a performance test if any of the general control measures specified in § 65.702(e) are used. If the operating limit is established using data from previous performance tests in accordance with § 65.702(e)(4), replacement of the biofilter media with the same type of media is not considered a process change and would not require a new performance test; however, you are still subject to the repeat performance test requirements, as specified in paragraph (b)(3) of this section.

(d) *Biofilter design evaluation.* If a referencing subpart allows you to conduct a design evaluation in lieu of a performance test, and you chose to do a design evaluation, you must meet the requirements of § 65.850 and, in demonstrating that the biofilter meets the applicable emission limit, address the characteristics specified in the referencing subpart.

(e) *Biofilter performance test records.* If you are required to conduct a performance test, you must record the biofilter bed temperature and moisture content, and the pressure drop through the biofilter bed measured during each performance test conducted, pursuant to §§ 65.820 through 65.829. You must record the biofilter bed temperature, moisture content and the pressure drop through the biofilter bed at least every 15 minutes and average these operating parameters over each run of the performance test.

(f) *Biofilter monitoring records.* You must keep the records specified in paragraphs (f)(1) and (2) of this section up-to-date and readily accessible, as applicable.

(1) Continuous records of the control device operating parameters or emissions specified to be monitored under paragraph (a) of this section, as applicable.

(2) Records of the daily average value, or for batch operations, operating block average value, of each continuously monitored operating parameter or records of continuous emissions according to the procedures specified in § 65.860(a).

§ 65.760 What requirements must I meet for sorbent injection and collection systems?

(a) *General.* If you use sorbent injection as an emission control technique, you must operate the sorbent injection system in accordance with this section. You must also meet the requirements in § 65.762 for the fabric filters used for sorbent collection.

(b) *Sorbent injection monitoring.* You must install the monitoring equipment and meet the requirements specified for sorbent injection in either Table 1 or Table 2 to this subpart.

(c) *Sorbent injection performance test.* You must conduct a performance test, pursuant to §§ 65.820 through 65.829, and paragraphs (c)(1) and (2) of this section, unless one of the general control measures specified in § 65.702(e) is used. A performance test conducted to meet the requirements of this section also satisfies the performance test requirements of § 65.762(b) provided that you monitor and record the appropriate fabric filter operating parameters during the performance test.

(1) You must conduct the performance test at the outlet of the fabric filter used for sorbent collection.

(2) If the sorbent is replaced with a different brand and type of sorbent that was used during the performance test, you must conduct a new performance test.

(d) *Sorbent injection design evaluation.* If a referencing subpart allows you to conduct a design evaluation in lieu of a performance test, and you chose to do a design evaluation, you must meet the requirements of § 65.850 and, in demonstrating that the sorbent injection system meets the applicable emission limit, address the characteristics specified in paragraphs (d)(1) and (2) of this section, as applicable.

(1) For a sorbent injection system, the design evaluation must consider the vent stream flow rate and temperature, levels of regulated materials to be adsorbed in the vent stream, sorbent type and brand, sorbent mass injection rate, sorbent injection carrier gas system, design of the injection system, location of sorbent injection site, downstream collection device (fabric filter or other device to capture the sorbent), residence time of the gas-sorbent mixture and contact characteristics of the gas-sorbent mixture.

(2) For a sorbent injection system that is controlling dioxins, furans, total hazardous air pollutants (HAP) or total organic HAP, as specified in Table 2 to this subpart, you must consider the temperature in the combustion device and in any particulate control devices upstream of injection system.

(e) *Sorbent injection performance test records.* If you are required to conduct a performance test, you must keep readily accessible records of the data specified in paragraphs (e)(1) and (2) of this section, as applicable, measured during each performance test conducted, pursuant to §§ 65.820 through 65.829.

(1) Record the brand and type of sorbent used during the performance test.

(2) If you have chosen to monitor operating parameters in Table 2 to this subpart, you must record the parameters, as specified in paragraphs (e)(2)(i) through (iii) of this section, as applicable.

(i) Record the rate of sorbent injection measured during the performance test at least every 15 minutes and average the injection rate over each run of the performance test.

(ii) Record the carrier gas flow rate measured during the performance test at least every 15 minutes and average the flow rate over each run of the performance test.

(iii) Record the temperature downstream of the combustion device and/or downstream of any particulate control devices, as applicable, measured during the performance test. Record the temperature(s) at least every 15 minutes and average the temperature(s) over each run of the performance test.

(f) *Sorbent injection monitoring records.* You must keep the records specified in paragraphs (f)(1) and (2) of this section up-to-date and readily accessible, as applicable.

(1) Continuous records of the control device operating parameters or emissions specified to be monitored under paragraph (b) of this section, as applicable.

(2) Records of the daily average value, or for batch operations, operating block average value, of each continuously monitored operating parameter or records of continuous emissions according to the procedures specified in § 65.860(a).

(g) *Sorbent injection other records.* You must keep records of the type and brand of sorbent used. If the type or brand of sorbent is changed, you must record the date the sorbent was changed, and maintain documentation that the substitute will provide the same or better level of control as the original sorbent.

§ 65.762 What requirements must I meet for fabric filters?

(a) Fabric filter monitoring. You must equip fabric filters with a bag leak detection system that is installed, calibrated, maintained and continuously operated according to the requirements in paragraphs (a)(1) through (10) of this section. Monitoring systems associated with bag leak detection are also subject to the requirements of § 65.710.

(1) Install a bag leak detection sensor(s) in a position(s) that will be representative of the relative or absolute particulate matter loadings for each exhaust stack, roof vent or compartment (*e.g.*, for a positive pressure fabric filter) of the fabric filter.

(2) Use a bag leak detection system certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 1 milligram per actual cubic meter (0.00044 grains per actual cubic foot) or less.

(3) Conduct a performance evaluation of the bag leak detection system in accordance with paragraph (b) of this section and consistent with the guidance provided in EPA–454/R–98–015 (incorporated by reference, see § 65.265).

(4) Use a bag leak detection system equipped with a device to continuously record the output signal from the sensor.

(5) Use a bag leak detection system equipped with a system that will sound an alarm when an increase in relative particulate material emissions over a preset level is detected. The alarm must be located such that the alert is observed readily by plan operating personnel.

(6) Install a bag leak detection system in each compartment or cell for positive pressure fabric filter systems that do not duct all compartments or cells to a common stack. Install a bag leak detector downstream of the fabric filter if a negative pressure or induced air filter is used. If multiple bag leak detectors are required, the system's instrumentation and alarm may be shared among detectors.

(7) Calibration of the bag leak detection system must, at a minimum, consist of establishing the baseline output level by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.

(8) Following initial adjustment, you must not adjust the sensitivity or range, averaging period, alarm set points or alarm delay time, except as established in a CPMS monitoring plan required in § 65.712 and paragraph (e)(1) of this section. In no event may the sensitivity be increased more than 100 percent or decreased by more than 50 percent over a 365-day period unless such adjustment follows a complete baghouse inspection that demonstrates the baghouse is in good operating condition.

(9) Each bag leak detection system must be operated and maintained such that the alarm does not sound more than 5 percent of the operating time during a 6-month period. If the alarm sounds more than 5 percent of the operating time during a 6-month period, it is considered an operating parameter exceedance and, therefore, a deviation, as specified in § 65.710(e)(2). You must calculate the alarm time, as specified in paragraphs (a)(9)(i) through (iv) of this section.

(i) If inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted.

(ii) If corrective action is required, each alarm time is counted as a minimum of 1 hour.

(iii) If you take longer than 1 hour to initiate corrective action, each alarm time (*i.e.*, time that the alarm sounds) is counted as the actual amount of time taken by you to initiate corrective action.

(iv) Your maximum alarm time is equal to 5 percent of the operating time during a 6-month period.

(10) If the alarm on a bag leak detection system is triggered, you must, within 1 hour of an alarm, initiate procedures to identify the cause of the alarm and take corrective action, as specified in the corrective action plan required in paragraph (e)(2) of this section.

(b) *Fabric filter performance test.* You must conduct a performance test, pursuant to §§ 65.820 through 65.829, unless one of the general control measures specified in § 65.702(e) is used. A performance test conducted to meet the requirements of this section also satisfies the performance test requirements of § 65.760(c) provided that § 65.760(c)(1) and (2) are followed and the appropriate sorbent injection operating parameters are monitored and recorded.

(c) *Fabric filter design evaluation.* If a referencing subpart allows you to conduct a design evaluation in lieu of a performance test, and you chose to do a design evaluation, you must meet the requirements of § 65.850. The design evaluation must include the pressure drop through the device and the ratio of volumetric gas flow to surface area of the cloth.

(d) *Fabric filter performance test records.* You must document the bag leak detection system's sensitivity to detecting changes in particulate matter emissions, range, averaging period and alarm set points during each performance test conducted, pursuant to §§ 65.820 through 65.829.

(e) *Fabric filter monitoring records.* For each bag leak detector used to monitor regulated material emissions from a fabric filter, you must maintain the records specified in paragraphs (e)(1) through (3) of this section.

(1) A CPMS monitoring plan, as specified in § 65.712. You must also include performance evaluation procedures and acceptance criteria (*e.g.,* calibrations) in your CPMS monitoring plan, including how the alarm set-point will be established.

(2) A corrective action plan describing corrective actions to be taken and the timing of those actions when the bag leak detection alarm sounds. You must initiate corrective action no later than 48 hours after a bag leak detection system alarm. Failure to take action within the prescribed time period is considered a deviation. Corrective actions may include, but are not limited to, the actions listed in paragraphs (e)(2)(i) through (vi) of this section.

(i) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other conditions that may cause an increase in regulated material emissions.

(ii) Sealing off defective bags or filter media.

(iii) Replacing defective bags or filter media or otherwise fixing the control device.

(iv) Sealing off a defective fabric filter compartment.

(v) Cleaning the bag leak detection system probe or otherwise fixing the bag leak detection system.

(vi) Shutting down the process producing the regulated material emissions.

(3) Records of any bag leak detection system alarm, including the date, time, duration and the percent of the total operating time during each 6-month period that the alarm sounds, with a brief explanation of the cause of the alarm, the corrective action taken and the schedule and duration of the corrective action.

(f) You must submit analyses and supporting documentation demonstrating conformance with EPA–454/R–98–015 (incorporated by reference, see § 65.265) and specifications for bag leak detection systems as part of the Notification of Compliance Status Report, as required, pursuant to § 65.880(f).

§ 65.800 What requirements must I meet for other control devices?

(a) *Other control device monitoring.* If you use a control device other than those listed in this subpart, you must

meet the requirements of paragraphs (a)(1) and (2) of this section.

(1) You must submit to the Administrator for approval the planned operating parameters to be monitored, and the recordkeeping and reporting procedures, as specified in § 65.884(h). You must also include a rationale for the proposed monitoring in your submittal. The Administrator will approve, deny or modify the proposed monitoring, reporting and recordkeeping requirements as part of the review of the plan or through the review of the permit application or by other appropriate means.

(2) If you receive approval from the Administrator for the information required in paragraph (a)(1) of this section, you must then establish an operating limit for the operating parameters that indicates proper operation of the control device. The information required in § 65.880(d) must be submitted in the Notification of Compliance Status Report. The operating limit may be based upon a prior performance test meeting the specifications of § 65.702(e)(4).

(b) *Other control device performance test.* You must conduct a performance test, pursuant to §§ 65.820 through 65.829, as applicable, unless any of the general control measures specified in § 65.702(e) are used.

(c) *Other control device performance test records.* If you are required to conduct a performance test, you must keep readily accessible records of the approved operating parameters, as established in paragraph (a) of this section measured during the performance test and any other records as may be necessary to determine the conditions of the performance test conducted, pursuant to §§ 65.820 through 65.829.

(d) *Other control device records.* You must keep the records specified in paragraphs (d)(1) and (2) of this section up-to-date and readily accessible, as applicable.

(1) You must keep records of the operating parameter(s) monitored, pursuant to the approved plan established in paragraph (a) of this section.

(2) Records of flow/no flow, as provided in § 65.860(i).

Performance Testing

§ 65.820 What are the performance testing requirements?

For each control device for which a performance test is required, you must conduct a performance test according to the schedule specified by the referencing subpart and the procedures in this section §§ 65.820 through 65.829, as applicable, unless any of the general control measures specified in § 65.702(e) are used. For all performance tests, a notification of the performance test and a performance test plan are also required, as specified in paragraphs (a) through (c) of this section. You must also provide the performance testing facilities, as specified in paragraph (d) of this section.

(a) *Notification of performance test.* You must notify the Administrator of your intention to conduct a performance test, as specified in § 65.884(a).

(b) *Performance test plan.* Before conducting a required performance test, you must develop and submit a performance test plan to the Administrator for approval. The test plan must include a test program summary, the test schedule, data quality objectives and both an internal and external quality assurance program. Data quality objectives are the pretest expectations of precision, accuracy and completeness of data, as specified in paragraphs (b)(1) through (4) of this section.

(1) The internal quality assurance program must include, at a minimum, the activities planned by routine operators and analysts to provide an assessment of test data bias and precision; an example of internal quality assurance to measure precision is the sampling and analysis of replicate samples.

(2) You must perform a test method performance audit during the performance test, as specified in § 60.8(g), § 61.13(e), or § 63.7(c)(2)(iii) of this chapter.

(3) You must submit the performance test plan to the Administrator at least 60 calendar days before the performance test is scheduled to take place, that is, simultaneously with the notification of intention to conduct a performance test required under paragraph (a) of this section, or on a mutually agreed upon date.

(4) The Administrator may request additional relevant information after the submittal of a performance test plan.

(5) If you would like to use an alternative test method or a change to a test method, you must follow the requirements of § 65.250, except for minor test method changes. You may propose minor test method changes in your performance test plan. Approval of the test plan is approval of any minor test method changes included in the test plan.

(c) *Approval of performance test plan.*

(1) The Administrator will notify you of approval or intention to deny approval of the performance test plan within 30 calendar days after receipt of the original plan and within 30 calendar days after receipt of any supplementary information that is submitted under paragraph (c)(1)(ii) of this section. An intention to disapprove the plan will include the information provided in (c)(1)(i) and (ii) of this section and will be provided to you before the Administrator disapproves a performance test plan.

(i) Notice of the information and findings on which the intended disapproval is based.

(ii) Notice of opportunity for you to present, within 30 calendar days after you have been notified of the intended disapproval, additional information to the Administrator before final action on the plan.

(2) If the Administrator does not approve or disapprove the performance test plan within the time period specified in paragraph (c)(1) of this section, then you must conduct the performance test within the time specified in this subpart using the specified method(s) and any minor changes to the test methods proposed in the test plan.

(d) *Performance testing facilities.* If required to do performance testing, you must provide performance testing facilities, as specified in paragraphs (d)(1) through (5) of this section.

(1) Sampling ports adequate for the applicable test methods, including meeting the provisions of paragraphs (d)(1)(i) and (ii) of this section, as applicable.

(i) Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures; and

(ii) Providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.

(2) Safe sampling platform(s).

(3) Safe access to sampling platform(s).

(4) Utilities for sampling and testing equipment.

(5) Any other facilities that the Administrator deems necessary for safe and adequate testing of a source.

§ 65.821 At what process conditions must I conduct performance testing?

You must conduct performance tests under the conditions specified in paragraphs (a) through (d) of this section, as applicable, unless the Administrator specifies or approves alternate operating conditions. Upon request, you must make available to the Administrator such records as may be

necessary to determine the conditions of performance tests performed, pursuant to this section.

(a) *Continuous process operations.* For continuous process operations, you must conduct all performance tests at maximum representative operating conditions for the process.

(b) *Batch process operations.* For batch process operations, testing must be conducted at absolute worst-case conditions or hypothetical worst-case conditions, as specified in § 65.822.

(c) *Combination of both continuous and batch unit operations.* For combined continuous and batch process operations, you must conduct performance tests when the batch process operations are operating at absolute worst-case conditions or hypothetical worst-case conditions, as specified in paragraph (b) of this section, and the continuous process operations are operating at maximum representative operating conditions for the process, as specified in paragraph (a) of this section.

(d) You must not conduct a performance test during startup, shutdown, periods when the control device is bypassed or periods when the process, monitoring equipment or control device is not operating properly.

§ 65.822 At what process conditions must I conduct performance testing for batch process operations?

If you choose to conduct testing at absolute worst-case conditions for batch process operations, you must characterize the conditions by the criteria presented in paragraph (a) of this section. If you choose to conduct testing at hypothetical worst-case conditions for batch process operations, you must characterize the conditions by the criteria presented in paragraph (b) of this section. In all cases, a performance test plan must be submitted to the Administrator for approval prior to testing in accordance with § 65.820(a) through (d). The performance test plan must include the emission profile described in paragraph (c) of this section.

(a) *Absolute worst-case conditions.* You must consider all relevant factors, including load and compound-specific characteristics, in defining absolute worst-case conditions. Absolute worst-case conditions are defined by the criteria presented in paragraph (a)(1) or (2) of this section if the maximum load is the most challenging condition for the control device. Otherwise, absolute worst-case conditions are defined by paragraph (a)(3) of this section.

(1) The period in which the inlet to the control device will contain the maximum projected regulated material load and will always contain at least 50 percent of the maximum regulated material load (in pounds) capable of being vented to the control device over any 8-hour period. An emission profile, as described in paragraph (c)(1) of this section, must be used to identify the 8-hour period that includes the maximum projected regulated material load.

(2) A 1-hour period of time in which the inlet to the control device will contain the highest regulated material mass loading rate, in lb/hr, capable of being vented to the control device. An emission profile, as described in paragraph (c)(1) of this section, must be used to identify the 1-hour period of maximum regulated material loading.

(3) The period of time when the regulated material loading or stream composition (including non-regulated material) is most challenging for the control device. These conditions include, but are not limited to, paragraphs (a)(3)(i) through (iii) of this section.

(i) Periods when the stream contains the highest combined regulated material load, in lb/hr, described by the emission profiles in paragraph (c) of this section.

(ii) Periods when the stream contains regulated material constituents that approach limits of solubility for scrubbing media.

(iii) Periods when the stream contains regulated material constituents that approach limits of adsorptivity for adsorption systems.

(b) *Hypothetical worst-case conditions.* Hypothetical worst-case conditions are simulated test conditions that, at a minimum, contain the highest hourly regulated material load of emissions that would be predicted to be vented to the control device from the emissions profile described in paragraphs (c)(2) or (3) of this section.

(c) *Emission profile.* For batch process operations, you must develop an emission profile for the vent to the control device that describes the characteristics of the vent stream at the inlet to the control device under worst-case conditions. The emission profile is an analysis of regulated material emissions versus time and must be developed, based on any one of the procedures described in paragraphs (c)(1) through (3) of this section.

(1) *Emission profile by process.* The emission profile by process must consider all emission episodes (for example, but not limited to, vessel filling, empty vessel purging, gas sweep of a partially filled vessel, vacuum operations, gas evolution, depressurization, heating and evaporation) that could contribute to the vent stack for a period of time that is sufficient to include all processes venting to the stack and must consider production scheduling. The emission profile by process must describe the regulated material load to the device that equals the highest sum of emissions from the episodes that can vent to the control device in any given hour. Emissions per episode must be calculated using the procedures specified in § 65.835(b).

(2) *Emission profile by process equipment.* The emission profile by process equipment must consist of emissions that meet or exceed the highest emissions, in lb/hr, that would be expected under actual processing conditions. The emission profile by process equipment must describe component configurations used to generate the emission events, volatility of materials processed in the process equipment and the rationale used to identify and characterize the emission events. The emissions may be based on using a compound more volatile than compounds actually used in the process(es), and the emissions may be generated from all process equipment in the process(es) or only selected process equipment.

(3) *Emission profile by capture and control device limitation.* The emission profile by capture and control device must consider the capture and control system limitations and the highest emissions, in lb/hr, that can be routed to the control device, based on maximum flow rate and concentrations possible because of limitations on conveyance and control components (*e.g.,* fans and lower explosive level alarms).

§ 65.823 How do I sample from vent streams?

You must conduct the applicable sampling, as specified in paragraphs (a) through (d) of this section.

(a) You must use Method 1 or 1A at 40 CFR part 60, appendix A–1, as appropriate, to select the sampling sites.

(1) For determination of compliance with a percent reduction requirement of regulated material or total organic compounds, sampling sites must be located at the outlet of the control device, and with the exception noted in § 65.724(b)(2), the control device inlet sampling site must be located at the exit from the unit operation before any control device.

(2) For determining compliance with a ppmv total regulated material or total organic compounds emissions limit in a referencing subpart, the sampling site

must be located at the outlet of the control device.

(3) For determining compliance with an emission limit requirement of a vent stream halogen atom mass emission rate prior to a combustion device, or to demonstrate that a vent stream is not halogenated, pursuant to § 65.702(c), collect samples prior to the combustion device.

(b) For determining compliance with percent reduction emission limits, you must collect samples simultaneously at the inlet and outlet of the control device during the performance test.

(c) For correcting concentrations to specified percent oxygen, the sampling site for the measurement of oxygen concentration must be the same as that of the regulated material samples, and the samples must be taken concurrently.

(d) For each test run, you must take either real-time measurements, an integrated sample or a minimum of four grab samples per hour. If grab sampling is used, then the samples must be taken at approximately equal intervals in time, such as 15-minute intervals during the run.

§ 65.824 What is the performance test duration?

(a) Except as provided in paragraph (c) of this section, for continuous process operations, a performance test must consist of three runs of at least 1 hour in length; and must be conducted under the conditions specified in § 65.821(a).

(b) Except as provided in paragraph (c) of this section, for batch process operations, a performance test must consist of three runs; and must be conducted under the conditions specified in § 65.821(b). Each run must occur over the same absolute or hypothetical worst-case conditions, as defined in § 65.822, and be tested over the length of the episode, at a minimum of 1 hour and not to exceed 8 hours.

(c) For control devices used to control emissions from transfer racks (except low throughput transfer racks that are capable of continuous vapor processing, but do not handle continuous emissions or multiple loading arms of a transfer rack that load simultaneously), each run must represent at least one complete tank truck or tank car loading period, during which regulated materials are loaded.

§ 65.825 What performance test methods do I use?

You must conduct the performance test using the applicable test methods and procedures specified in Table 5 to this subpart and paragraphs (a) through (e) of this section, as applicable, unless you request an alternative test method or a change to a test method, as specified in § 65.250.

(a) If you use ASTM D6420–99(2010), ''Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry'' (incorporated by reference, see § 65.265) in lieu of Method 18 at 40 CFR part 60, appendix A–6 or Method 320 at 40 CFR part 63, appendix A to measure specific organic regulated material compound concentration, as applicable, at the inlet and/or outlet of a control device, then you must meet the conditions specified in paragraphs (a)(1) through (3) of this section.

(1) The target compound(s) must be listed in Section 1.1 of ASTM D6420–99 (2010), ''Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry'' (incorporated by reference, see § 65.265), and the target concentration is between 150 parts per billion by volume and 100 ppmv.

(2) If one (or more) target compound(s) is not listed in Section 1.1 of ASTM D6420–99 (2010), ''Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry'' (incorporated by reference, see § 65.265), but is potentially detected by mass spectrometry, an additional system continuing calibration check after each run, as detailed in Section 10.5.3 of ASTM D6420–99, must be followed, met, documented and submitted with the performance test report, even if a moisture condenser is not used or the compound is not considered soluble.

(3) A minimum of one sample/analysis cycle must completed at least every 15 minutes.

(b) If using Method 25A at 40 CFR part 60, appendix A–7 to determine compliance with a total organic compounds outlet concentration or percent reduction limit specified in a referencing subpart, you must follow the procedures in paragraphs (b)(1) through (3) of this section.

(1) Calibrate the instrument on propane.

(2) When demonstrating compliance with an outlet concentration emission limit specified in the referencing subpart, you must use a span value of the analyzer between 1.5 and 2.5 times the applicable emission limit in the referencing subpart. When demonstrating compliance with a percent reduction by making measurements at the inlet and outlet of the control device, you must use a span value of the analyzer of between 1.5 and 2.5 times the highest expected total organic compounds concentration at each location.

(3) Report the results as carbon, calculated according to Equation 25A–1 of Method 25A at 40 CFR part 60, appendix A–7.

(c) If you are using Method 320 at 40 CFR part 63, appendix A, pursuant to Table 5 to this subpart, you must follow the validation procedure of section 13.0 of EPA Method 320 unless the validation procedure was conducted at another source and it can be shown that the exhaust gas characteristics are similar at both sources. When demonstrating compliance with an emission limit for hydrogen halides and halogens, EPA Method 320 may only be used if you can show that there are no diatomic halogen molecules present in the vent stream being tested.

(d) If the uncontrolled or inlet gas stream to the control device contains formaldehyde, you must conduct emissions testing according to paragraph (d)(1) or (2) of this section.

(1) If you elect to comply with a percent reduction requirement and formaldehyde is the principal regulated material compound (*i.e.,* the highest concentration for any regulated compound in the stream by volume), you must use Method 320 at 40 CFR part 63, appendix A, to measure formaldehyde at the inlet and outlet of the control device, unless the vent stream being tested has entrained water droplets. If the vent stream contains entrained water droplets, you must use EPA Method 316 instead of EPA Method 320 to measure formaldehyde concentration. Use the percent reduction in formaldehyde as a surrogate for the percent reduction in total regulated material emissions.

(2) If you elect to comply with an outlet total organic regulated material concentration or total organic compounds concentration limit, and the uncontrolled or inlet gas stream to the control device contains greater than 10 percent (by volume) formaldehyde, you must use Method 320 at 40 CFR part 63, appendix A, to determine the formaldehyde concentration, unless the vent stream being tested has entrained water droplets. If the vent stream contains entrained water droplets, you must use EPA Method 316 instead of EPA Method 320 to measure formaldehyde concentration. Calculate the total organic regulated material concentration or total organic compounds concentration by totaling the formaldehyde emissions measured using EPA Method 316 or EPA Method 320 and the other regulated material

compound emissions measured using Method 18 at 40 CFR part 60, appendix A–6, Method 25A at 40 CFR part 60, appendix A–7, EPA Method 320 or ASTM D6420–99(2010), ''Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry'' (incorporated by reference, see § 65.265).

(e) If the uncontrolled or inlet gas stream to the control device contains carbon disulfide, you must conduct emissions testing according to paragraph (e)(1) or (2) of this section.

(1) If you elect to comply with a percent reduction requirement and carbon disulfide is the principal regulated material compound (i.e., the highest concentration for any regulated compound in the stream by volume), you must use Method 18 at 40 CFR part 60, appendix A–6 or Method 15 at 40 CFR part 60, appendix A–5, to measure carbon disulfide at the inlet and outlet of the control device. Use the percent reduction in carbon disulfide as a surrogate for the percent reduction in total regulated material emissions.

(2) If you elect to comply with an outlet total organic regulated material concentration or total organic compounds concentration limit, and the uncontrolled or inlet gas stream to the control device contains greater than 10 percent (by volume) carbon disulfide, you must use Method 18 at 40 CFR part 60, appendix A–6 or Method 15 at 40 CFR part 60, appendix A–5, to determine the carbon disulfide concentration. Calculate the total organic regulated material concentration or total organic compounds concentration by totaling the carbon disulfide emissions measured using Method 15 at 40 CFR part 60, appendix A–5 or Method 18 at 40 CFR part 60, appendix A–6 and the other regulated material compound emissions measured using Method 18 at 40 CFR part 60, appendix A–6, or Method 25A at 40 CFR part 60, appendix A–7, Method 320 at 40 CFR part 63, appendix A or ASTM D6420–99(2010), ''Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry'' (incorporated by reference, see § 65.265), as applicable.

(f) You must not use Method 26 at 40 CFR part 60, appendix A–8, to test gas streams with entrained water droplets.

§ 65.826 How do I calculate emissions in parts per million by volume concentration?

Use the procedures specified in paragraph (a) of this section to calculate ppmv concentration. The calculated concentration must be corrected to a standard percent oxygen, if required by the referencing subpart, using the procedures specified in paragraph (b) of this section.

(a) *Concentration calculation.* The concentration of either total organic compounds (minus methane or ethane) or total organic regulated material must be calculated according to paragraph (a)(1) or (2) of this section.

(1) The total organic compounds concentration (CTOC) is the sum of the concentrations of the individual components and must be computed for each run using Equation 2 of this section.

$$C_{TOC} = \frac{1}{x}\left(\sum_{i=1}^{x}\sum_{j=1}^{n} C_{ji}\right) \qquad \text{(Eq. 2)}$$

Where:

C_{TOC} = Concentration of total organic compounds (minus methane and ethane), dry basis, ppmv.

x = Number of samples in the sample run.

n = Number of components in the sample.

C_{ji} = Concentration of sample component j (where j is not methane or ethane) of sample i, dry basis, ppmv.

(2) You must compute the total organic regulated material (CREG) according to Equation 2 of this section except that you need only sum the regulated species.

(b) *Concentration correction calculation.* If a referencing subpart requires the concentration of total organic compounds or organic regulated material to be corrected to standard oxygen, the correction must be made, as specified in paragraph (b)(1) of this section. For batch process operations, you must correct the concentration for supplemental gases, as specified in paragraph (b)(2) of this section.

(1) Determine the concentration corrected to a standard percent oxygen (Cc) specified by the referencing subpart, using Equation 3 of this section.

$$C_c = C_{TOC}\left(\frac{20.9 - \%O_{2s}}{20.9 - \%O_{2d}}\right) \qquad \text{(Eq. 3)}$$

Where:

C_c = Concentration of total organic compounds or organic regulated material corrected to a standard percent oxygen, dry basis, ppmv.

C_{TOC} = Concentration of total organic compounds (minus methane and ethane) or organic regulated material, dry basis, ppmv.

$\%O_{2s}$ = Concentration of oxygen specified by the referencing subpart, percentage by volume.

$\%O_{2d}$ = Measured concentration of oxygen, dry basis, percentage by volume.

(2) For batch process operations, correct the measured concentration for any supplemental gases using Equation 4 of this section.

$$C_a = C_m\left(\frac{Q_s + Q_a}{Q_a}\right) \qquad \text{(Eq. 4)}$$

Where:

C_a = Corrected outlet concentration of regulated material, dry basis, ppmv.

C_m = Actual concentration of regulated material measured at control device outlet, dry basis, ppmv.

Q_a = Total volumetric flow rate of all gas streams vented to the control device, except supplemental gases, cubic meters per minute.

Q_s = Total volumetric flow rate of supplemental gases, cubic meters per minute.

§ 65.827 How do I demonstrate compliance with a percent reduction requirement?

(a) To demonstrate compliance with a percent reduction requirement for a control device specified in a referencing subpart, you must comply with § 65.828.

(b) To meet a process aggregated percent reduction emission requirement specified in a referencing subpart for a batch process, you must follow the provisions, as specified in § 65.835.

(c) For combined streams of continuous and batch process operations subject to a process aggregated percent reduction emission requirement in a referencing subpart, you must demonstrate that the control device meets the percent reduction requirements for both batch and continuous process operations by following the provisions specified in §§ 65.828 and 65.835.

§ 65.828 How do I determine percent reduction?

To determine a percent reduction for a control device, you must use the procedures specified in paragraphs (a) and (b) of this section. For small boilers and process heaters, you must follow the provisions of § 65.724(b)(1) and (2).

(a) *Mass rate of total organic compounds or regulated material.* Compute the mass rate of either total organic compounds (minus methane and ethane) or regulated material (E_i, E_o), as applicable. Use Equations 5 and 6 of this section.

$$E_i = K_2 \left(\sum_{j=1}^{n} C_{ij} M_{ij} \right) Q_i \qquad \text{(Eq. 5)}$$

$$E_o = K_2 \left(\sum_{j=1}^{n} C_{oj} M_{oj} \right) Q_o \qquad \text{(Eq. 6)}$$

Where:

E_i, E_o = Emission rate of total organic compounds (minus methane and ethane) or emission rate of regulated material in the sample at the inlet and outlet of the control device, respectively, dry basis, kilogram per hour.

K_2 = Constant, $2.494 \times 10 - 6$ $(\text{ppmv})^{-1}$ (g-mol per standard cubic meter) (kilogram per gram) (minute per hour), where standard temperature is 20 degrees Celsius (68 degrees Fahrenheit).

N = Number of compounds in the sample.

C_{ij}, C_{oj} = Concentration on a dry basis of organic compound j (where j is not methane or ethane) in ppmv of the gas stream at the inlet and outlet of the control device, respectively. If the total organic compounds emission rate is being calculated, C_{ij} and C_{oj} include all organic compounds measured minus methane and ethane; if the regulated material emissions rate is being calculated, all organic regulated material are included.

M_{ij}, M_{oj} = Molecular weight of compound j, gram per g-mol, of the gas stream at the inlet and outlet of the control device, respectively.

Q_i, Q_o = Vent stream flow rate, dry standard cubic meter per minute, at a temperature of 20 degrees Celsius (68 degrees Fahrenheit), at the inlet and outlet of the control device, respectively.

(b) *Percent reduction in total organic compounds or regulated material.* Determine the percent reduction in total organic compounds (minus methane and ethane) or regulated material using Equation 7 of this section.

$$R = \frac{E_i - E_o}{E_i} (100) \qquad \text{(Eq. 7)}$$

Where:

R = Control efficiency of control device, percent.

E_i = Mass rate of total organic compounds (minus methane and ethane) or regulated material at the inlet to the control device as calculated under paragraph (a) of this section, kilograms total organic compounds per hour or kilograms regulated material per hour.

E_o = Mass rate of total organic compounds (minus methane and ethane) or regulated material at the outlet of the control device, as calculated under paragraph (a) of this section, kilograms total organic compounds per hour or kilograms regulated material per hour.

§ 65.829 How do I demonstrate compliance with a hydrogen halide and halogen emission limit specified in a referencing subpart?

You must conduct a performance test, pursuant to § 65.820, and follow the procedures in paragraphs (a) through (d) of this section, as applicable, when determining compliance with a hydrogen halide and halogen emission limit specified in a referencing subpart.

(a) To determine compliance with a halogen atom mass emission rate emission limit requirement, you must use Equation 8 of this section to calculate the mass emission rate of halogen atoms:

$$E = K_2 Q \left(\sum_{j=1}^{n} \sum_{i=1}^{m} C_j L_{ji} M_{ji} \right) \qquad \text{(Eq. 8)}$$

Where:

E = Mass of halogen atoms, dry basis, kilogram per hour.

K_2 = Constant, 2.494×10^{-6} (ppmv)$^{-1}$ (g-mol per standard cubic meter) (kilogram per gram) (minute per hour), where standard temperature is 20 degrees Celsius (68 degrees Fahrenheit).

Q = Flow rate of gas stream, dry standard cubic meters per minute, determined according to an engineering assessment, as specified in § 65.830 or, pursuant to Table 5 to this subpart.

n = Number of halogenated compounds j in the gas stream.

m = Number of different halogens i in each compound j of the gas stream.

j = Halogenated compound in the gas stream.

i = Halogen atom in compound j of the gas stream.

C_j = Concentration of halogenated compound j in the gas stream, dry basis, ppmv.

L_{ji} = Number of atoms of halogen i in compound j of the gas stream.

M_{ji} = Molecular weight of halogen atom i in compound j of the gas stream, kilogram per kilogram-mol.

(b) Calculate the mass emissions rate of each hydrogen halide and halogen compound as the summation of the measured concentrations and the gas stream flow rate, as shown in Equations 9 and 10 of this section. To determine compliance with an outlet mass emission rate limit specified in a referencing subpart, only Equation 10 is required.

$$E_i = kQ_i \sum C_{ij} \qquad \text{(Eq. 9)}$$

$$E_o = kQ_o \sum C_{oj} \qquad \text{(Eq. 10)}$$

Where:

E_i, E_o = Total mass rate of hydrogen halide and halogen compounds, in kilograms per hour.

K = $6 \times 10 - 5$, Conversion factor of milligrams per minute to kilograms per hour.

C_{ij}, C_{oj} = Concentration of each hydrogen halide and halogen compound in the gas stream, in milligrams per dry standard cubic meter at the inlet and outlet of the control device, respectively.

Q_i, Q_o = Vent stream flow rate, dry standard cubic meter per minute, at a temperature of 20 degrees Celsius (68 degrees Fahrenheit), at the inlet and outlet of the control device, respectively.

(c) Calculate the percent reduction of hydrogen halide and halogen compounds using the inlet and outlet mass emission rates calculated in paragraph (b) of this section and Equation 7 of this section.

(d) To demonstrate compliance with a mass rate (*e.g.,* kilogram per hour) outlet emission limit, the test results must show that the mass emission rate of total hydrogen halides and halogens measured at the outlet of the absorber or other halogen reduction device is below the mass rate outlet emission limit specified in a referencing subpart.

§ 65.830 When can an engineering assessment be used and what does it include?

(a) You may conduct an engineering assessment if you perform any of the actions described in paragraphs (a)(1) through (6) of this section.

(1) Determine whether a vent stream is halogenated, as specified in § 65.702(c)(2).

(2) Supplement your performance test, as specified in § 65.713(a).

(3) Establish your operating limit on ranges or limits previously established under a referencing subpart, as specified in § 65.713(d).

(4) Determine flow rate of a gas stream, as specified in Equation 8 of § 65.829(a).

(5) Calculate regulated material emissions for each emission episode that is not described in Section 3 of EPA EIIP Volume II: Chapter 16 (incorporated by reference, see § 65.265), as specified in § 65.835(b)(2) or § 65.835(d)(3).

(6) Calculate regulated material emissions for each emission episode that you can demonstrate to the Administrator that the emission estimation techniques in Section 3 of EPA EIIP Volume II: Chapter 16 (incorporated by reference, see § 65.265) are not appropriate, as specified in § 65.835(e).

(b) An engineering assessment includes, but is not limited to, the information specified in paragraphs (b)(1) through (4) of this section.

(1) Previous test results, provided the tests are representative of current operating practices at the process unit.

(2) Bench-scale or pilot-scale test data representative of the process under representative operating conditions.

(3) Maximum flow rate, regulated material emission rate, concentration or other relevant parameter specified or implied within a permit limit applicable to the vent stream.

(4) Design analysis, based on accepted chemical engineering principles, measurable process parameters or physical or chemical laws or properties. Examples of analytical methods include, but are not limited to, the methods specified in paragraphs (b)(4)(i) through (iii) of this section.

(i) Use of material balances, based on process stoichiometry to estimate maximum organic regulated material concentrations.

(ii) Estimation of maximum flow rate, based on physical process equipment design such as pump or blower capacities.

(iii) Estimation of regulated material concentrations, based on saturation conditions.

Batch Emission Calculations

§ 65.835 What emissions calculations must I use for batch process operations for purposes of compliance with an aggregated percent reduction?

(a) *General.* To demonstrate compliance with a process aggregated percent reduction emission limit in a referencing subpart for batch process operations, including batch process operations in combined streams of continuous and batch unit operations, you must compare the sums of the controlled and uncontrolled emissions for the batch vent streams subject to control within the process, and show that the specified reduction is met. The emission reduction must be calculated as shown in Equation 11 of this section using parameters from Equations 12 and 13 of this section.

$$R = \frac{E_u - E_c}{E_u} \qquad \text{(Eq. 11)}$$

$$E_u = \sum_i E_i \qquad \text{(Eq. 12)}$$

$$E_c = \sum_i D_i + \sum_i (E_i)(1 - Z_i) \qquad \text{(Eq. 13)}$$

Where:

E_u = Uncontrolled emissions for batch vent streams.

E_c = Controlled emissions for batch vent streams.

E_i = Uncontrolled emissions for each emission episode, as determined, pursuant to § 65.835(b).

i = Each emission episode that applies to the batch process (for example, but not limited to, vessel filling, empty vessel purging, gas sweep of a partially filled vessel, vacuum operations, gas evolution, depressurization, heating and evaporation).

D_i = Controlled emissions for each emission episode from a condenser, as determined, pursuant to paragraph (d) of this section.

Z_i = Emission percent reduction for a control device other than a condenser used during an emission episode (i), as determined, pursuant to § 65.828.

(b) *Uncontrolled emissions.* You must calculate uncontrolled emissions from all process equipment according to the procedures described in paragraphs (b)(1) and (2) of this section to demonstrate initial compliance with a percent reduction emission limit in a referencing subpart for batch process operations, including operations in combined streams of continuous and batch unit operations. You must also use these procedures if you choose to develop an emission profile by process, as specified in § 65.822(c)(1).

(1) Except as provided in paragraph (e) of this section, you must determine uncontrolled emissions of regulated material using measurements and/or calculations for each batch emission episode within each unit operation using the emission estimation techniques described in Section 3 of EPA EIIP Volume II: Chapter 16 (incorporated by reference, see § 65.265). Chemical property data can be obtained from standard reference texts.

(2) You must conduct an engineering assessment according to § 65.830 in order to calculate uncontrolled regulated material emissions for each emission episode that is not described in Section 3 of EPA EIIP Volume II: Chapter 16 (incorporated by reference, see § 65.265). You may also conduct an engineering assessment according to § 65.830 if you meet the requirements of paragraphs (d)(3) or (e) of this section. Data or other information supporting a finding that the emissions estimation equations are inappropriate are subject to preapproval by the Administrator and must be reported in the batch pre-compliance report.

(c) *Controlled emissions.* Except as provided in paragraph (d) of this section, you must calculate controlled emissions using the percent reduction for the control device, as determined from the performance test required in § 65.828 to demonstrate initial compliance with a percent reduction emission limit in a referencing subpart for batch process operations, including batch process operations in combined streams of continuous and batch unit operations.

(d) *Controlled emissions from condensers.* For a condenser used as control, you may calculate controlled emissions from the condenser using the procedures specified in paragraphs (d)(1) through (4) of this section to demonstrate initial compliance with a percent reduction emission limit in a referencing subpart for batch process operations, including batch process operations in combined streams of continuous and batch unit operations.

(1) Except as provided in paragraph (d)(2) of this section, you must determine controlled emissions from the condenser using calculations for each batch emission episode within each unit operation according to the emission estimation techniques described in Section 3 of EPA EIIP Volume II: Chapter 16 (incorporated by reference, see § 65.265). You must use the temperature and regulated material partial pressures that are determined at the exit temperature and exit pressure conditions of the condenser. Chemical property data can be obtained from standard reference texts.

(2) For heating and depressurization episodes, you must determine controlled emissions from the condenser using the procedures, as specified in paragraphs (d)(2)(i) through (iii) of this section.

(i) You must determine the average molecular weight of regulated material in vapor exiting the receiver using Equation 14 of this section.

$$MW_{RM} = \sum_{i=1}^{n} \frac{\left((P_i)_{T_1} + (P_i)_{T_2}\right) MW_i}{\sum_{i=1}^{n} \left((P_i)_{T_1} + (P_i)_{T_2}\right)} \qquad \text{(Eq. 14)}$$

Where:

MW_{RM} = Average molecular weight of regulated material in vapor exiting the receiver.

$(P_i)_{T1}$ = Partial pressure of each regulated material in the vessel headspace at initial temperature of the receiver.

$(P_i)_{T2}$ = Partial pressure of each regulated material in the vessel headspace at final temperature of the receiver.

MW_i = Molecular weight of the individual regulated material.

n = Number of regulated material compounds in the emission stream.

i = Identifier for a regulated material compound.

(ii) You must determine the number of moles of non-condensable gas displaced from the vessel using Equation 15 of this section for heating episodes; and Equation 16 of this section for depressurization episodes, as applicable.

$$\Delta\eta = \frac{V}{R}\left(\left(\frac{P_{nc1}}{T_1}\right) - \left(\frac{P_{nc2}}{T_2}\right)\right) \qquad \text{(Eq. 15)}$$

$$\Delta\eta = \frac{V}{RT}\left(P_{nc1} - P_{nc2}\right) \qquad \text{(Eq. 16)}$$

Where:

$\Delta\eta$ = Number of moles of non-condensable gas displaced from the vessel being heated or depressurized.
V = Volume of free space in the vessel being heated or depressurized.
R = Ideal gas law constant.
P_{nc1} = Initial partial pressure of the non-condensable gas in the headspace of the vessel being heated or depressurized.
P_{nc2} = Final partial pressure of the non-condensable gas in the headspace of the vessel being heated or depressurized.
T_1 = Initial temperature of the vessel contents being heated.
T_2 = Final temperature of the vessel contents being heated.
T = Exit temperature of the receiver.

(iii) You must determine the mass of regulated material emitted from the receiver due to the vessel being heated or depressurized using Equation 17 of this section.

$$E = \Delta\eta \bullet \left(\frac{\sum_{i=1}^{n} P_i MW_{RM}}{P_T - \sum_{j=1}^{m}\left(P_j\right)}\right) \qquad \text{(Eq. 17)}$$

Where:

E = Mass of regulated material emitted from the receiver due to the vessel being heated or depressurized.
$\Delta\eta$ = The number of moles of non-condensable displaced from the vessel being heated or depressurized, as calculated for heating episodes using Equation 15 of this section; or as calculated for depressurization episodes using Equation 16 of this section.
P_T = Pressure in the receiver.
P_i = Partial pressure of each individual regulated material determined at the temperature of the receiver.
P_j = Partial pressure of each individual condensable (including regulated material) determined at the temperature of the receiver.
n = Number of regulated material compounds in the emission stream.
i = Identifier for a regulated material compound.
j = Identifier for a condensable compound.
MW_{RM} = Average molecular weight of regulated material in vapor exiting the receiver, as calculated using Equation 14 of this section.
m = Number of condensable compounds (including regulated material) in the emission stream.

(3) You must conduct an engineering assessment, as specified in paragraph (b)(2) of this section, for each emission episode that is not described in Section 3 of EPA EIIP Volume II: Chapter 16 (incorporated by reference, see § 65.265).

(4) You may elect to conduct an engineering assessment, as specified in paragraph (e) of this section, if you demonstrate to the Administrator that the methods described in paragraphs (d)(1) or (2) of this section are not appropriate.

(e) *Modified emission estimation technique.* Instead of calculating uncontrolled emissions, as specified in § 65.835(b)(1) of this section, or instead of calculating controlled emissions from a condenser used as a control device, as specified in § 65.835(d)(1) and (2) of this section, you may conduct an engineering assessment, as specified in paragraph (b)(2) of this section, if you can demonstrate to the Administrator that the emission estimation techniques in Section 3 of EPA EIIP Volume II: Chapter 16 (incorporated by reference, see § 65.265) are not appropriate. The engineering assessment can result in modified versions of the emission estimation techniques described in Section 3 of EPA EIIP Volume II: Chapter 16 (incorporated by reference, see § 65.265) if you demonstrate that they have been used to meet other regulatory obligations, and they do not affect applicability assessments or compliance determinations under the referencing subpart. One criterion you could use to demonstrate that the emission estimation techniques described in Section 3 of EPA EIIP Volume II: Chapter 16 (incorporated by reference, see § 65.265) are not appropriate is if previous test data are available that show a greater than 20-percent discrepancy between the test value and the estimated value.

Design Evaluation

§ 65.850 How do I demonstrate compliance through design evaluation?

(a) For each non-flare control device for which a design evaluation, as allowed by the referencing subpart, is used as an alternative to a performance test, as specified in § 65.702(e)(1), you must conduct the design evaluation according to the procedures in paragraphs (b) through (e) of this section.

(b) You must prepare a design evaluation, as specified in paragraph (c) of this section. Also, unless you are using a CEMS to monitor the emissions to demonstrate compliance with the emission standard of the referencing subpart, you must prepare a monitoring description, as specified in paragraph (d) of this section. The design

evaluation and monitoring description must be submitted with the Notification of Compliance Status Report, as specified in § 65.880(c). You must comply with § 63.711 for all CEMS.

(c) The design evaluation must include documentation demonstrating that the control device being used achieves the required emission limit of a referencing subpart. You must identify in the design evaluation, each emission point routed to the control device and the applicable emission limit. The design evaluation must also address the composition of the vent stream entering the control device, including flow and regulated material concentration, and the information specified in paragraphs (c)(1) through (4) of this section and § 65.724(d) for boilers and process heaters, § 65.726(c) for thermal oxidizers, § 65.728(c) for catalytic oxidizers, § 65.740(c) for absorbers, § 65.742(d) for adsorbers regenerated onsite, § 65.744(c) for non-regenerative adsorbers, § 65.746(c) for condensers, § 65.748(d) for biofilters, § 65.760(d) for sorbent injection and § 65.762(c) for fabric filters, as applicable.

(1) For storage vessels, the design evaluation must include documentation demonstrating that the control device being used achieves the required control efficiency during reasonably expected maximum filling rate.

(2) For transfer racks, the design evaluation must demonstrate that the control device achieves the required control efficiency during the reasonably expected maximum transfer loading rate.

(3) For a non-flare control device used to control emissions from batch process operations, establish emission profiles and conduct the evaluation under worst-case conditions, as determined, pursuant to § 65.822.

(4) If the vent stream is not the only inlet to the control device, the efficiency demonstration also must consider all other vapors, gases and liquids other than fuels received by the control device.

(d) The monitoring description must include the information specified in paragraphs (d)(1) and (2) of this section to identify the operating parameters that you will monitor to assure proper operation of the control device such that the control device is meeting the specified emission limit of the referencing subpart.

(1) A description of the operating parameter or parameters to be monitored, an explanation of the criteria used for selection of that parameter (or parameters) and when the monitoring will be performed (*e.g.,* when the liquid level in the storage vessel is being raised). If continuous records are specified, indicate whether the provisions of §§ 65.712 and 65.713 apply.

(2) The operating limit, monitoring frequency (*e.g.,* every 15 minutes), and averaging time for each operating parameter identified in paragraph (d)(1) of this section. The specified operating limit must represent the conditions for which the control device is being properly operated and maintained such that the control device is meeting the specified emission limit of the referencing subpart.

(e) You must operate and maintain the non-flare control device so that the monitored operating parameters, as determined in paragraph (d) of this section, remain within the operating limits specified in the Notification of Compliance Status whenever emissions of regulated material are routed to the control device.

Recordkeeping

§ 65.855 How do I calculate monitoring data averages?

(a) *Data averages for compliance.* You must calculate monitoring data averages, as specified in paragraphs (a)(1) through (4) of this section, as applicable.

(1) Except as specified in paragraphs (a)(2) through (4) of this section, daily average values of continuously monitored emissions and operating parameters must be calculated for each operating day using all continuously monitored data, except the data specified in paragraph (b) of this section must be excluded from the average. The operating day must be the period defined in the operating permit or in the Notification of Compliance Status.

(2) For batch process operations and as an alternative to the requirement for daily averages in paragraph (a)(1) of this section, you may determine averages for operating blocks while excluding the data specified in paragraph (b) of this section.

(3) If all values of a monitored operating parameter, during an operating day or operating block, are below the operating limit established, pursuant to § 65.713, you do not have to calculate the daily average for the operating parameter. In such cases, you may not discard the recorded values, as allowed in § 65.860(a)(2).

(4) If all values of monitored continuous emissions, during an operating day or operating block, reduced, as specified in § 65.711(j), are below the emission limit specified in the referencing subpart, you do not have to calculate the daily or block average of the emissions. In such cases, you may not discard the recorded values, as allowed in § 65.860(a)(2).

(b) *Excluded data.* In computing averages to determine compliance, as specified in paragraph (a) of this section, you must exclude monitoring data recorded during periods identified in paragraphs (b)(1) through (3) of this section.

(1) Periods of non-operation of the process unit (or portion thereof), resulting in cessation of the emissions to which the monitoring applies.

(2) Periods of no flow to a control device, as recorded, pursuant to paragraph § 65.860(i).

(3) Any monitoring data recorded during CEMS or CPMS system breakdowns, out-of-control periods, repairs, maintenance periods, instrument adjustments or checks to maintain precision and accuracy, calibration checks, and zero (low-level), mid-level (if applicable) and high-level adjustments.

(c) *Data averages for recording.* For the purposes of recording and in addition to the averages specified in paragraph (a) of this section, you may calculate hourly averages of continuous parameter monitoring and continuous emissions data from all measured values or, if measured more frequently than once per minute, from at least one measured value per minute. The hourly averages may include values of excluded periods, as specified in paragraph (b) of this section. The hourly averages may be retained as an alternative to retaining records of all measured values if the provisions of § 65.860(a)(2) are met.

§ 65.860 What records must I keep?

(a) *Continuous monitoring data records.* You must maintain records, as specified in paragraphs (a)(1) through (6) of this section, as applicable.

(1) Except as provided in paragraph (a)(2) of this section, you must maintain a record of each measured value measured at least once every 15 minutes.

(2) Except as provided in paragraph (a)(3) of this section, or in § 65.855(a)(4) through (6), you may calculate and record block hourly average values calculated, as specified in § 65.855(c) and discard all but the most recent 3 hours of continuous (15-minute or shorter) records that do not include deviations that are specified in § 65.710(e). If you select this method for retaining monitoring data, you must also meet the provisions of paragraphs (a)(2)(i) through (iii) of this section.

(i) You must retain a file that contains a hard copy of the data acquisition

system algorithm used to reduce the measured data into the reportable form of the standard and calculate the hourly averages.

(ii) The 1-hour averages may include measurements taken during periods of CEMS or CPMS system breakdowns, out-of-control periods, repairs, maintenance periods, instrument adjustments or checks to maintain precision and accuracy, calibration checks, and zero (low-level), mid-level (if applicable) and high-level adjustments. However, you must not include these periods for any average computed to determine compliance, as specified in § 65.855(a).

(iii) A record must be maintained stating whether the calculated 1-hour averages include, or do not include, measurements taken during periods of CEMS or CPMS breakdowns, out-of-control periods, repairs, maintenance periods, instrument adjustments or checks to maintain precision and accuracy, calibration checks, and zero (low-level), mid-level (if applicable) and high-level adjustments.

(3) The Administrator, upon notification to you, may require you to maintain all measurements, as required by paragraph (a)(1) of this section, if the Administrator determines these records are required to more accurately assess the compliance status of the regulated source.

(4) You must keep records of all applicable daily and operating block averages, as calculated, pursuant to § 65.855(a).

(5) You must keep records of periods of operation during which the daily average of monitored operating parameters, calculated as specified in § 65.855(a), is outside the operating limits established, pursuant to § 65.713.

(6) You must keep records of periods of operation during which the daily average of continuous emissions, calculated as specified in § 65.855(a), is above the emission standard specified in the referencing subpart.

(b) *Non-continuous monitoring records.* You must keep up-to-date and readily accessible records, as specified in § 65.728(f) for catalytic oxidizers, § 65.742(j) for adsorbers regenerated onsite, § 65.744(k) for non-regenerative adsorbers, § 65.746(e) for condensers, § 65.760(g) for sorbent injection and § 65.762(e) for fabric filters.

(c) *Performance test records.* For each performance test conducted, pursuant to §§ 65.820 through 65.829, and for any prior performance test that is accepted in place of a performance test conducted, pursuant to §§ 65.820 through 65.829, you must keep readily accessible records of the data specified in paragraphs (c)(1) through (3) of this section, as applicable, recorded over the full period of the performance test, as well as averages calculated over the full period of the performance test.

(1) The records specified in § 65.724(e) for boilers and process heaters, § 65.726(d) for thermal oxidizers, § 65.728(d) for catalytic oxidizers, § 65.740(d) for absorbers, § 65.742(h) for adsorbers regenerated onsite, § 65.744(d) for non-regenerative adsorbers, § 65.746(e) for condensers, § 65.748(e) for biofilters, § 65.760(e) for sorbent injection, § 65.762(d) for fabric filters and § 65.800(c) for other control devices.

(2) The concentration of regulated material or total organic compounds (ppmv, by compound), as applicable, at the outlet of the control device, as specified in § 65.826; or the percent reduction of regulated material or total organic compounds, as applicable, achieved by the control device, as specified in § 65.828.

(3) You must retain copies of the performance test reports during the period that the performance tests are applicable to the operating limits being complied with and 5 years after the time they become obsolete. A complete test report must include the items listed in paragraphs (c)(3)(i) through (xvii) of this section. A performance test is ''completed'' when field sample collection is terminated.

(i) The purpose of the test.

(ii) A brief process description.

(iii) A complete unit description, including a description of feed streams and control devices.

(iv) Sampling site description.

(v) Pollutants measured.

(vi) Description of sampling and analysis procedures and any modifications to standard procedures.

(vii) Quality assurance procedures.

(viii) Record of operating conditions during the test, including the records required by paragraph (c)(1) of this section.

(ix) Record of preparation of standards.

(x) Record of calibrations.

(xi) Raw data sheets for field sampling.

(xii) Raw data sheets for field and laboratory analyses.

(xiii) Chain-of-custody documentation.

(xiv) Explanation of laboratory data qualifiers.

(xv) Example calculations of all applicable stack gas parameters, emission rates, percent reduction rates and analytical results, as applicable.

(xvi) Any other information required by the test method or the Administrator.

(xvii) Any additional information necessary to determine the conditions of performance tests.

(d) *CMS records.* You must maintain the records specified in paragraphs (d)(1) through (4) of this section.

(1) The CEMS performance evaluation and monitoring plan and the CPMS monitoring plan, as applicable, developed and implemented, as specified in §§ 65.711 and 65.712, respectively.

(2) Results of all CEMS evaluations, as specified in the CEMS performance evaluation and monitoring plan and, as specified in § 65.711, including the information listed in paragraphs (d)(2)(i) through (v) of this section.

(i) Raw CEMS evaluation measurements.

(ii) All measurements necessary to determine the conditions of the CEMS evaluation.

(iii) Raw performance testing measurements associated with relative accuracy tests and audits.

(iv) Cylinder gas certifications.

(v) Information specified to be recorded in the applicable performance specification.

(3) Records of all calibrations, certifications, audits, adjustments and other quality control procedures required in the CEMS performance evaluation and monitoring plan or CPMS monitoring plan.

(4) If you use more than one CEMS to measure the regulated materials from one emissions unit (*e.g.*, multiple breechings, multiple outlets), you must maintain records for both CEMS. However, if you use one CEMS as a backup to another CEMS, you must maintain records for the CEMS used to meet the monitoring requirements of this part.

(e) *General process records.* You must maintain records of the information specified in paragraphs (e)(1) through (8) of this section.

(1) A description of the process and the type of process equipment used, including a description of storage vessels, wastewater, transfer operations or heat exchangers that are subject to this subpart.

(2) An identification of related vent streams, including, for batch operations, their associated emissions episodes.

(3) The applicable control requirements of this subpart, including the level of required control for each emission point.

(4) The control device(s) and/or methods used on each regulated emission point to meet the emission standard, including a description of the operating conditions of the control device.

(5) Combined emissions that are routed to the same control device.

(6) The applicable monitoring requirements of this subpart and the operating limit(s) that apply for each emission point routed to the control device.

(7) Calculations and engineering analyses required to demonstrate compliance.

(8) Actual total monthly process operating time.

(f) *Batch process records.* You must keep records for batch process operations, as specified in paragraphs (f)(1) through (5) of this section.

(1) You must keep a schedule or log of operating scenarios, updated each time you put a different operating scenario into effect. You must maintain records in your daily schedule or log of processes indicating each point at which an emission episode with a different operating limit begins and ends, even if the duration of the emission episode and the monitoring for an operating limit is less than 15 minutes.

(2) For each operating scenario, you must record a justification demonstrating that the operating limit selected for the operating scenario (or operating limits selected for the individual emission episodes of the operating scenario) will not result in emissions in excess of the emissions standards. All calculations and engineering analyses performed to develop the operating limits must be included in the records. For the purposes of this paragraph, a revised operating scenario for an existing process is considered a different operating scenario when one or more of the data elements listed in paragraphs (e)(1) through (7) of this section have changed.

(3) You must keep records of all emission profiles you develop according to § 65.822(c). You must include descriptions and documentation of worst-case operating and/or testing conditions for control devices.

(4) Calculations used to demonstrate compliance according to §§ 65.820 through 65.829 and, if applicable, § 65.835. You must include data and rationale used to support an engineering assessment to calculate uncontrolled emissions in accordance with § 65.835(b)(2), if applicable.

(5) You must keep records of the information specified in paragraphs (f)(5)(i) and (ii) of this section for the collection of all batch vent streams at the regulated source in compliance with an aggregated percent reduction emission limit specified in the referencing subpart if some of the vents are controlled to less than the percent reduction requirement.

(i) Records of each batch operated and whether it was considered a standard or nonstandard batch.

(ii) The estimated uncontrolled and controlled emissions for each nonstandard batch.

(g) *Records of CMS, process and control changes.* You must maintain records of changes in CMS, processes and controls, including a description of the change.

(h) *Closed vent system bypass records.* For closed vent systems subject to the requirements of § 65.720, you must maintain records of the information specified in paragraphs (h)(1) and (2) of this section, as applicable.

(1) All times when flow was detected in the bypass line, the vent stream was diverted from the control device or the flow indicator was not operating, as specified in § 65.720(d)(1).

(2) All occurrences of periods when a bypass of the system was indicated (the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out and records of any car-seal that has been broken), as specified in § 65.720(d)(2).

(i) *Records of flow/no flow to a control device.* You must keep records of periods of no flow, or no flow of regulated material to the control device, including the start and stop time and dates of periods of flow and no flow. If flow to the control device is not intermittent, you must record that flow is not intermittent and flow/no flow records are not required.

(j) *Records of excess emissions, operating parameters exceeding their limits, out-of-control periods and periods when CMS, processes or controls are inoperative or not operating properly.* You must identify each occurrence of the periods specified in paragraphs (j)(1) through (6) of this section, include the date and time of commencement and completion of each period and the total duration (recorded in hours).

(1) Periods of excess emissions.

(2) Periods when the daily average of an operating parameter is outside the established operating limit.

(3) Periods when CEMS or CPMS are out-of-control.

(4) Periods when a CEMS or CPMS is not operating properly or is inoperative, except for zero (low-level), mid-level (if applicable) and high-level checks.

(5) Periods when the process is not operating properly.

(6) Periods when a control device is not working properly.

(k) *Records demonstrating compliance with a waiver of recordkeeping or reporting requirements.* You must keep a record of any information demonstrating whether you are meeting the requirements for a waiver of recordkeeping or reporting requirements under this part, if the source has been granted a waiver under § 65.235.

(l) *Fabric filter plan.* You must maintain a record of your corrective action plan, as specified in § 65.762(e)(2).

(m) *Adsorber corrective action plan.* You must maintain a record of the corrective action plan, as specified in § 65.742(e).

(n) *Records of submittals to the Administrator.* You must maintain copies of all reports, notifications and requests (*e.g.*, requests or applications for alternative monitoring, test methods, test method changes, recordkeeping or reporting and waivers) submitted to the Administrator associated with this part and applicable referencing subparts. You must also maintain all documentation supporting submitted notifications and reports.

(o) *Other records.* You must keep records of all information specified to be recorded in design evaluations prepared, pursuant to § 65.850; all data, assumptions and procedures used in the engineering assessment, pursuant to § 65.830; requests and approvals for other control devices, pursuant to § 65.800; and alternative requests and the Administrator's approvals of alternative requests, as specified in § 65.235 for recordkeeping waivers, § 65.240 for alternative monitoring (including alternative operating parameters) and recordkeeping, § 65.245 for performance test waivers and § 65.250 for alternative test methods.

Reporting

§ 65.880 What information do I submit as part of my Notification of Compliance Status?

You must include the information listed in paragraphs (a) through (g) of this section, as applicable, in the Notification of Compliance Status that you submit according to the procedures in § 65.225.

(a) *Batch operations.* You must submit the information specified in § 65.860(f)(2) through (4).

(b) *Routing emissions to a fuel gas system.* If you elect to comply by routing emissions to a fuel gas system, you must submit a statement that the emission stream is connected to the fuel gas system.

(c) *Design evaluation and monitoring description.* If you conduct a design

evaluation instead of a performance test to demonstrate compliance with a referencing subpart, you must submit the information specified in paragraphs (c)(1) through (3) of this section.

(1) The design evaluation and monitoring description specified in § 65.850(c) and (d), respectively.

(2) Any data and calculations used to select the operating parameters and establish the operating limits specified in 65.850(d).

(3) The information specified in paragraphs (d)(3) and (4) of this section, as applicable.

(d) *Operating limit for monitored operating parameters.* You must submit the information in paragraphs (d)(1) through (3) of this section, for each control device requiring operating limits, as applicable.

(1) The operating limit and averaging time for each operating parameter identified for each control device, as determined, pursuant to § 65.713 or § 65.884(h), and the emission point(s) routed to each control device.

(2) The rationale for the established operating limit for each operating parameter for each emission point, including any data and calculations used to develop the operating limit and a description of why the operating limit indicates proper operation of the control device.

(3) A definition of the source's operating day for purposes of determining daily average values of monitored operating parameters. The definition must specify the times at which an operating day begins and ends. The operating day must cover a 24-hour period if operation is continuous. It may be from midnight to midnight or another daily period. For batch process operations, you may define the operating blocks, as specified in § 65.295, instead of an operating day.

(e) *Designating a halogen vent stream.* You must submit a list of the vent streams designated as halogenated, pursuant to § 65.702(c)(2).

(f) *Bag leak detection system documentation.* You must submit the bag leak detection system information specified in § 65.762(f).

(g) *Biofilter thermocouple placement rationale.* If you use multiple thermocouples in representative locations throughout the biofilter bed to calculate the average biofilter bed temperature across these thermocouples prior to reducing the temperature data to 15 minute (or shorter) averages for purposes of establishing operating limits for the biofilter, you must submit rationale for their site selection.

§ 65.882 What information must I submit in my semiannual periodic report?

You must include the information listed in paragraphs (a) through (e) of this section, as applicable, in the semiannual periodic report that you submit, according to the procedures in § 65.225.

(a) The beginning and ending dates of the reporting period and the total operating time of the regulated source during the reporting period.

(b) For any information reported in a semiannual periodic report, provide the identification of the process unit and/or emission unit the information, using the same terminology and identification numbers used in the Notification of Compliance Status or subsequent periodic report.

(c) For CEMS and CPMS, include the information specified in paragraphs (c)(1) through (6) of this section, as applicable.

(1) For each period when a CEMS or CPMS is out of control, inoperative or not operating properly, include the date, the start time and the stop time of the period.

(2) For each period when your CEMS or CPMS data does not meet the data availability requirements defined in § 65.710(e)(4) and (5), include the date, the start time and the stop time of the period.

(3) The daily average emission value, as calculated in § 65.855, for each day when the calculated daily average emission value indicated excess emissions, include the date, the start time and the stop time of the period.

(4) The block average emission value, as calculated in § 65.855, for each block when the calculated block average value indicated excess emissions, include the date, the start time and the stop time of the period.

(5) The daily average value of each monitored operating parameter, as calculated in § 65.855, that is outside the operating limit established according to § 65.713 and documented in your Notification of Compliance Status or subsequent periodic report, include the date, the start time and the stop time of the period.

(6) The block average value of each monitored operating parameter, as calculated in § 65.855, that is outside the operating limit established according to § 65.713 and documented in your Notification of Compliance Status or subsequent periodic report, include the date, the start time and the stop time of the period.

(d) For closed vent systems, include the records of periods when vent steam flow was detected in the bypass line or diverted from the control device, a flow indicator was not operating or a bypass of the system was indicated, as specified in § 65.860(h).

(e) All records of daily and operating block averages, required in § 65.860(a)(4).

§ 65.884 What other reports must I submit and when?

You must submit the reports specified in paragraphs (a) through (j) of this section, as applicable, according to the procedures in § 65.225. You must provide the identification of the process unit and/or emission unit information, using the same terminology and identification numbers used in the Notification of Compliance Status or subsequent report.

(a) *Performance test notification.* At least 60 calendar days before a performance test is initially scheduled, you must notify the Administrator of your intention to conduct a performance test to allow the Administrator to have an observer present during the test. You must include the performance test plan required in § 65.820(b) with your notification to allow the Administrator time to review and approve the performance test plan. For batch process operations, you must include the emission profile(s) required in § 65.822(c). If you are unable to conduct the performance test on the date specified in a performance test notification, due to unforeseeable circumstances beyond your control, you must notify the Administrator as soon as practicable and without delay prior to the scheduled performance test date and specify the date when the performance test is rescheduled.

(b) *Submission of performance test reports.* Within 60 calendar days of completing a performance test, you must submit a performance test report with the information specified in § 65.860(c)(3).

(c) *CEMS performance evaluation notification and monitoring plan.* If you use a CEMS, you must submit a notification of the date the CEMS performance evaluation under § 65.711(c) is scheduled to begin, along with the CEMS performance evaluation and monitoring plan. The notification and plan must be submitted according to the schedule specified in paragraphs (c)(1) through (3) of this section.

(1) If you are conducting a performance test, you must submit the notification and plan simultaneously with the notification of the performance test date required in paragraph (a) of this section.

(2) If you are not conducting a performance test, you must submit the notification and plan at least 60

calendar days before the CEMS performance evaluation is scheduled to begin, as specified by the referencing subpart, or on a mutually agreed upon date.

(3) If you are unable to conduct the CEMS performance evaluation on the date specified in the notification specified in paragraph (c)(1) or (2) of this section, due to unforeseeable circumstances beyond your control, you must notify the Administrator as soon as practicable and without delay prior to the scheduled CEMS performance evaluation date and specify the date when the evaluation is rescheduled.

(d) *Submission of CEMS performance evaluations.* Within 60 calendar days of completing a CEMS performance evaluation, pursuant to § 65.711, and your CEMS performance evaluation and monitoring plan, you must submit the results of the CEMS performance evaluation.

(e) *CPMS monitoring plan submittal.* If you use a CPMS, you must submit the CPMS monitoring plan required in § 65.712(c), 60 days prior to the performance test, with the performance test notification and test plan specified in paragraph (a) of this section, except as specified in paragraphs (e)(1) through (3) of this section.

(1) If no performance test is required, submit your CPMS monitoring plan 60 days prior to your compliance date.

(2) If you submit an application specified in § 65.884(f) to use a prior performance test, submit your CPMS monitoring plan with the application to use the prior performance test.

(3) If you are making a change to a previously submitted monitoring plan, submit the revised monitoring plan 60 days before you intend to implement the revised plan.

(f) *Application to substitute a prior performance test.* You must submit an application to the Administrator for approval if you would like to substitute a prior performance test for an initial performance test, as allowed by § 65.702(e)(4). The application must be submitted no later than 90 days before the performance test is required. The application must include all documentation required by the applicable test methods specified in § 65.825 and all documentation of monitoring during the performance test that supports the operating parameters for which you establish limits. Your application must document that the prior test was conducted using the same sample times or volumes required by the referencing subpart and the methods required by the referencing subpart or Table 5 of this subpart. Your prior test report must include all of the information required by § 65.860(c). The application must also include information demonstrating that no process changes were made since the test, or that the results of the performance test or compliance assessment reliably demonstrates compliance despite process changes.

(g) *Batch pre-compliance report.* You must submit a batch pre-compliance report, which includes a description of the test conditions, data, calculations and other information used to establish operating limits according to § 65.713 for all batch operations, and a description of why each operating limit indicates the control device is meeting the specified emission limit of the referencing subpart during each specific emission episode. If you use an engineering assessment, as specified in § 65.835(b)(2), you must also include data or other information supporting a finding that the emissions estimation equations in § 65.835 are inappropriate. You must submit the batch pre-compliance report according to the schedule in paragraph (g)(1) of this section. The Administrator will approve or disapprove your report, as specified in paragraph (g)(2) of this section. You must notify the Administrator of any changes to the report according to the schedule in paragraph (g)(3) of this section.

(1) You must submit the report for approval at least 6 months prior to the compliance date of the referencing subpart, or with the permit application for modification, construction or reconstruction.

(2) We will either approve or disapprove the report within 90 days after we receive it. If we disapprove the report, you must still be in compliance with the emission limitations and work practice standards of the referencing subpart by the compliance date of the referencing subpart.

(3) To change any of the information submitted in the report, you must submit a revised report 60 days before the planned change is to be implemented in order to allow time for review and approval by the administrator before the change is implemented.

(h) *Requests for approval of different operating parameters.* You may request approval to monitor a different operating parameter than those specified for control devices in this subpart; and you must propose operating parameters for any control device not specified in this subpart, as specified in § 65.800. These requests must contain the information specified in paragraphs (h)(1) through (8) of this section, and you must comply with paragraph (h)(9) of this section.

(1) A description of the operating parameter(s) to be monitored to ensure the control technology or pollution prevention measure is operated in conformance with its design and achieves the emission limit, as specified in the referencing subpart. Specify the applicable averaging time(s) for the operating parameter(s) and an explanation of the criteria used to select the operating parameter(s) and averaging times.

(2) A description of the methods and procedures that will be used to demonstrate that the operating parameter indicates proper operation of the control device and the schedule for this demonstration.

(3) For parameter monitoring that does not generate continuous data, include the monitoring results that demonstrate that the device is outside the established limit.

(4) The frequency and content of monitoring, recording and reporting.

(5) If continuous records are specified, indicate whether the provisions of §§ 65.712 and 65.713 apply.

(6) The rationale for the proposed monitoring, recordkeeping and reporting system.

(7) If your request includes a proposal to use a control device other than those listed in this subpart, your request must include a description of the proposed control device and your proposed operating parameters.

(8) A statement that you will establish an operating limit for the monitored operating parameter(s) as part of the Notification of Compliance Status or a semiannual periodic report.

(9) You must submit the request for this approval according to the procedures specified for alternative monitoring in § 65.240.

(i) *Changes in CMS, processes or controls.* For changes specified in § 65.702(f), or whenever you change any of the information submitted in the Notification of Compliance Status Report or a subsequent report, you must report the information specified in paragraphs (i)(1) and (2) of this section, within 30 days of completing the process change.

(1) A description of the change.

(2) Revisions to any of the information reported in the Notification of Compliance Status Report specified in § 65.880, or subsequent report.

(j) *New operating scenarios for batch operations.* For batch operations, you must report the information specified in § 65.860(f)(2) for each new operating scenario that has not been reported in the Notification of Compliance Status or

a previous report, within 30 days of implementing the new operating scenario.

List of Tables in Subpart M of Part 65

TABLE 1 TO SUBPART M OF PART 65—CEMS MONITORING

For all control devices, you must . . .	If . . .	At this location . . .	To . . .	And the monitoring equipment must . . .
Install CEMS ..	The referencing subpart requires the use of CEMS or you choose not to conduct the monitoring according to Table 2 to this subpart.	At a spot representative of the exhaust stream of the control device.	Measure the compound required by the referencing subpart.	Be capable of measuring the compounds required by the referencing subpart; and meet the requirements in § 65.711.

TABLE 2 TO SUBPART M OF PART 65—MONITORING EQUIPMENT AS AN ALTERNATIVE TO CEMS MONITORING

You must do the following . . .	If . . .	And you must monitor . . .	And . . .
Small Boilers and Process Heaters			
Install a CPMS for temperature in the fire box.		Temperature in the firebox.	
Thermal Oxidizers			
Install a CPMS for temperature in the fire box or in the ductwork immediately downstream of the fire box in a position before any substantial heat exchange occurs.		Temperature in the firebox or ductwork.	
Catalytic Oxidizers			
Install a CPMS for temperature in the gas stream immediately before and after the catalyst bed.	You choose to monitor the temperature differential across the catalyst bed, rather than temperature at the inlet of the catalyst bed.	Temperature differential across the catalyst bed.	
Install a CPMS for temperature at the inlet of the catalyst bed.	You choose to monitor the temperature at the inlet of the catalyst bed, rather than the temperature differential across the catalyst bed; and the temperature differential between the inlet and outlet of the catalytic oxidizer during normal operating conditions is less than 10 degrees Celsius (18 degrees Fahrenheit).	Temperature at the inlet of the catalyst bed.	You must conduct catalyst checks according to § 65.728(a)(1) and (2).
All Absorbers			
Install a CPMS for liquid flow at the inlet of the absorber.	You choose to monitor only the influent liquid flow, rather than the liquid-to-gas ratio.	Influent liquid flow.	
Install CPMS for liquid and gas flow at the inlet of the absorber.	You choose to monitor the liquid-to-gas ratio, rather than only the influent liquid flow; and you want the ability to lower liquid flow with changes in gas flow.	Liquid-to-gas ratio as determined by dividing the influent liquid flow rate by the inlet gas flow rate. The units of measure must be consistent with those used to calculate this ratio during the performance test.	You must measure the gas stream by: (A) Measuring the gas stream flow at the absorber inlet; or (B) Using the design blower capacity, with appropriate adjustments for pressure drop; or (C) If the absorber is subject to regulations in 40 CFR parts 264 through 266 that require a determination of the liquid-to-gas ratio prior to the applicable compliance date, as specified in a referencing subpart, determine the gas stream flow by the method that had been used to comply with those regulations if it is still representative.

TABLE 2 TO SUBPART M OF PART 65—MONITORING EQUIPMENT AS AN ALTERNATIVE TO CEMS MONITORING—Continued

You must do the following . . .	If . . .	And you must monitor . . .	And . . .
Install CPMS for pressure at the gas stream inlet and outlet of the absorber.	Your pressure drop through the absorber is greater than 5 inches of water.	Pressure drop through the absorber.	
Acid Gas Absorbers			
Install a CPMS for pH at the absorber liquid effluent.		pH of the absorber liquid effluent.	
Absorbers Controlling Particulate and/or Metal Regulated Materials			
Install CPMS for temperature at the absorber gas stream outlet.	Your pressure drop through the absorber is 5 inches of water or less.	Exit gas temperature of the absorber.	
Install CPMS for temperature at the absorber gas stream inlet.	Your pressure drop through the absorber is 5 inches of water or less, and you choose not to monitor the specific gravity of liquid stream at inlet and exit of the absorber, or liquid inlet feed pressure of the absorber.	Inlet gas temperature of the absorber.	
Install CPMS for specific gravity at the absorber liquid stream inlet and outlet.	The difference between the specific gravity of the saturated scrubbing fluid and specific gravity of the fresh scrubbing fluid is greater than 0.02 specific gravity units; and your pressure drop through the absorber is 5 inches of water or less; and you choose not to monitor the inlet gas temperature of the absorber, or liquid inlet feed pressure of the absorber.	Specific gravity of liquid stream at inlet and exit of the absorber.	
Install CPMS for pressure at the absorber liquid stream inlet.	Your pressure drop through the absorber is 5 inches of water or less, and you choose not to monitor the inlet gas temperature of the absorber, or specific gravity of liquid stream at inlet and exit of the absorber.	Liquid inlet feed pressure of the absorber.	
Absorbers Not Controlling Acid Gas, Particulates and Metal Regulated Materials			
Install CPMS for chemical strength at the inlet liquid stream of the absorber.	You are using a scrubbing liquid other than water.	Chemical strength at the inlet liquid stream to the absorber.	
Install CPMS for flow rate of the chemical at the chemical stream inlet.	You are using a scrubbing liquid other than water.	Chemical flow rate.	
Install CPMS for temperature at the absorber gas stream outlet.	You are using water as the scrubbing liquid; and your pressure drop through the absorber is 5 inches of water or less.	Exit gas temperature of the absorber.	
Install CPMS for temperature at the absorber gas stream inlet.	You are using water as the scrubbing liquid; and your pressure drop through the absorber is 5 inches of water or less; and you choose not to monitor the liquid inlet feed pressure of the absorber.	Inlet gas temperature of the absorber.	
Install CPMS for pressure at the absorber liquid stream inlet.	You are using water as the scrubbing liquid; and your pressure drop through the absorber is 5 inches of water or less; and you choose not to monitor the inlet gas temperature of the absorber.	Liquid inlet feed pressure of the absorber.	

TABLE 2 TO SUBPART M OF PART 65—MONITORING EQUIPMENT AS AN ALTERNATIVE TO CEMS MONITORING—Continued

You must do the following . . .	If . . .	And you must monitor . . .	And . . .
Adsorbers Regenerated On Site			
Install a CPMS for mass flow	You operate a non-vacuum regeneration system.	Total regeneration stream mass flow for each regeneration cycle.	
Install a CPMS for temperature in the adsorber bed..	You operate a non-vacuum regeneration system.	The adsorber bed temperature after each regeneration and within 15 minutes of completing any temperature regulation (cooling or warming to bring bed temperature closer to vent gas temperature) portion of the regeneration cycle.	
Install a CPMS for temperature in the adsorber bed..	You operate a non-vacuum regeneration system.	The adsorber bed temperature during regeneration, except during any temperature regulating (cooling or warming to bring bed temperature closer to vent gas temperature) portion of the regeneration cycle.	
Install a CPMS for pressure in the vacuum pump suction line.	You operate a vacuum regeneration system.	Vacuum level for each minute during regeneration. You must establish a minimum target and a length of time at which the vacuum must be below the minimum target during regeneration.	
Install a frequency monitoring device.	You operate any type of regeneration system.	Regeneration frequency (i.e., operating time since last regeneration) and duration.	
Non-Regenerative Adsorbers			
Install a system of dual adsorber units in series.		The concentration of volatile organic compounds or regulated material(s) through a sample port at the outlet of the first adsorber bed in series.	Measure the concentration of volatile organic compounds through a sample port using a portable analyzer, in accordance with Method 21 of 40 CFR part 60, appendix A–7, for open-ended lines. Measure the concentration of regulated material(s) through a sample port using either: Chromatographic analysis and Method 18 of 40 CFR part 60, appendix A using a calibration gas or gas mixture containing the compounds present in the adsorber vent gas; or a flame ionization analyzer and Method 25A at 40 CFR part 60, appendix A–7 using propane as the calibration gas.
Condensers			
Install a CPMS for temperature in the condensate receiver.		Temperature of the condensate receiver.	
Biofilters			
Install CPMS for temperature in the biofilter bed.		Biofilter bed temperature	You must include the rationale for the placement of the CPMS for temperature in the Notification of Compliance Status Report, pursuant to § 65.880(g).
Install CPMS for moisture content in the biofilter bed.		Biofilter bed moisture content.	
Install CPMS for pressure at the inlet and outlet of the biofilter bed.		Pressure drop through the biofilter bed.	

TABLE 2 TO SUBPART M OF PART 65—MONITORING EQUIPMENT AS AN ALTERNATIVE TO CEMS MONITORING—Continued

You must do the following . . .	If . . .	And you must monitor . . .	And . . .
Sorbent Injection			
Install a CPMS for flow		Sorbent injection rate.	
Install a CPMS for flow		Sorbent injection carrier gas flow rate.	
Install a CPMS for temperature	You are operating a combustion device upstream of the sorbent injection system.	Temperature in the ductwork immediately downstream of the fire box of the combustion device.	
Install a CPMS for temperature	You are using a particulate matter control device upstream of the adsorbent injection system.	Temperature in the ductwork immediately downstream of the particulate matter control device.	

TABLE 3 TO SUBPART M OF PART 65—OPERATING PARAMETERS, OPERATING LIMITS AND DATA MONITORING, RECORDKEEPING AND COMPLIANCE FREQUENCIES

For the operating parameter applicable to you, as specified in Table 2 to this subpart, you must monitor . . .	Establish the following operating limit during your performance test . . .	Monitor, record, and demonstrate continuous compliance using these minimum frequencies.		
		Data measurement	Data recording	Data averaging period for compliance
Small Boilers and Process Heaters				
Temperature in the fire box	Minimum temperature	Continuous	Every 15 minutes	Daily.
Thermal Oxidizers				
Temperature in the fire box or downstream ductwork prior to heat exchange.	Minimum temperature	Continuous	Every 15 minutes	Daily.
Catalytic Oxidizers				
Temperature differential across catalyst bed.	Minimum temperature differential.	Continuous	Every 15 minutes	Daily.
Temperature at the inlet to catalyst bed and condition of the catalyst.	Minimum inlet temperature and catalyst condition as specified in § 65.728(a)(1) and (2).	Continuous for temperature; frequency determined in accordance with § 65.728(a)(1)(ii) for sampling and analysis of the catalyst; and annual for internal inspections of catalyst bed.	Every 15 minutes for temperature; frequency determined in accordance with § 65.728(a)(1)(ii) for sampling and analysis of the catalyst; and annual for internal inspections of catalyst bed.	Daily for temperature; frequency determined in accordance with § 65.728(a)(1)(ii) for sampling and analysis of the catalyst; and annual for internal inspections of catalyst bed.
All Absorbers				
Influent liquid flow	Minimum inlet liquid flow ...	Continuous	Every 15 minutes	Daily.
Influent liquid flow rate and gas stream flow rate.	Minimum influent liquid-to-gas ratio.	Continuous	Every 15 minutes	Daily.
Pressure drop	Pressure drop range	Continuous	Every 15 minutes	Daily.
Acid Gas Absorbers				
pH of effluent liquid	Minimum pH	Continuous	Every 15 minutes	Daily.
Absorbers Controlling Particulate and/or Metal Regulated Materials				
Exit gas temperature	Maximum exit gas temperature.	Continuous	Every 15 minutes	Daily.
Inlet gas temperature	Temperature range of temperature difference between inlet and exit gas.	Continuous	Every 15 minutes	Daily.
Specific gravity	Range of specific gravity difference between inlet and outlet scrubbing liquid.	Continuous	Every 15 minutes	Daily.
Liquid feed pressure	Pressure range	Continuous	Every 15 minutes	Daily.

TABLE 3 TO SUBPART M OF PART 65—OPERATING PARAMETERS, OPERATING LIMITS AND DATA MONITORING, RECORDKEEPING AND COMPLIANCE FREQUENCIES—Continued

For the operating parameter applicable to you, as specified in Table 2 to this subpart, you must monitor . . .	Establish the following operating limit during your performance test . . .	Monitor, record, and demonstrate continuous compliance using these minimum frequencies.		
		Data measurement	Data recording	Data averaging period for compliance
Absorbers Not Controlling Acid Gas, Particulates, and Metal Regulated Materials				
Chemical strength of influent liquid stream.	Minimum chemical strength.	Continuous	Every 15 minutes	Daily.
Chemical flow rate	Minimum flow rate	Continuous	Every 15 minutes	Daily.
Exit gas temperature	Maximum exit gas temperature.	Continuous	Every 15 minutes	Daily.
Inlet gas temperature	Temperature range of temperature difference between inlet and exit gas.	Continuous	Every 15 minutes	Daily.
Liquid feed pressure	Pressure range	Continuous	Every 15 minutes	Daily.
Adsorbers Regenerated On Site				
Total regeneration stream mass flow for each generation cycle.	Minimum total flow per regeneration cycle.	Continuous	Every 15 minutes during regeneration cycle.	Total flow for each regeneration cycle.
Adsorber bed temperature after each regeneration.	Maximum temperature	Continuously after regeneration and within 15 minutes of completing any temperature regulation.	Every 15 minutes after regeneration and within 15 minutes of completing any temperature regulation.	Daily.
Adsorber bed temperature during regeneration.	Minimum temperature	Continuously during regeneration except during any temperature regulating portion of the regeneration cycle.	Every 15 minutes during regeneration cycle.	Average of regeneration cycle.
Vacuum and duration of regeneration.	Minimum vacuum and period of time for regeneration.	Continuous	Every 15 minutes during regeneration cycle.	Average vacuum and duration of regeneration.
Regeneration frequency	Minimum regeneration frequency and duration.	Continuous	Every 15 minutes during regeneration cycle.	Date and time of regeneration start and stop.
Adsorber operation valve sequencing and cycle time.	Correct valve sequencing and minimum cycle time.	Daily	Daily	N/A.
Non-Regenerative Adsorbers				
Outlet VOC concentration or regulated material concentration of the first adsorber bed in series.	Breakthrough limit as determined by the referencing subpart.	Daily, except as provided in § 65.744(a)(2).	Daily, except as provided in § 65.744(a)(2).	N/A.
Average adsorber bed life	N/A	Daily until breakthrough for 3 adsorber bed changeouts.	Calculated average bed life.	N/A.
Condensers				
Gas temperature at the exit of the condenser.	Maximum outlet gas temperature.	Continuous	Every 15 minutes	Daily.
Sorbent Injection				
Sorbent injection rate	Minimum injection rate	Continuous	Every 15 minutes	Daily.
Sorbent injection carrier gas flow rate.	Minimum carrier gas flow rate.	Continuous	Every 15 minutes	Daily.
Temperature in the ductwork immediately downstream of the firebox of the combustion device.	Minimum temperature	Continuous	Every 15 minutes	Daily.
Temperature in the ductwork immediately downstream of the particulate matter control device.	Minimum temperature	Continuous	Every 15 minutes	Daily.

TABLE 3 TO SUBPART M OF PART 65—OPERATING PARAMETERS, OPERATING LIMITS AND DATA MONITORING, RECORDKEEPING AND COMPLIANCE FREQUENCIES—Continued

For the operating parameter applicable to you, as specified in Table 2 to this subpart, you must monitor . . .	Establish the following operating limit during your performance test . . .	Monitor, record, and demonstrate continuous compliance using these minimum frequencies.		
		Data measurement	Data recording	Data averaging period for compliance
Fabric Filters				
Alarm time	Maximum alarm time is not established on a site-specific basis but is specified in § 65.762(a)(9).	Continuous	Each date and time of alarm start and stop.	Maximum alarm time specified in § 65.762(a)(9).
Biofilter				
Biofilter bed temperature	Temperature range	Continuous	Every 15 minutes; if you use multiple temperature monitoring devices, you must calculate the average biofilter bed temperature across the temperature devices prior to reducing the temperature data to 15 minute averages.	Daily.
Biofilter bed moisture content.	Moisture content range	Continuous	Every 15 minutes	Daily.
Pressure drop through the biofilter bed.	Minimum pressure drop	Continuous	Every 15 minutes	Daily.

TABLE 4 TO SUBPART M OF PART 65—CALIBRATION AND QUALITY CONTROL REQUIREMENTS FOR CPMS

If you monitor this parameter . . .	Your accuracy requirements are . . .	Your calibration requirements are . . .
Temperature	±1 percent over the normal range of temperature measured or 2.8 degrees Celsius (5 degrees Fahrenheit), whichever is greater, for non-cryogenic temperature ranges. ±2.5 percent over the normal range of temperature measured or 2.8 degrees Celsius (5 degrees Fahrenheit), whichever is greater, for cryogenic temperature ranges.	Performance evaluation annually and following any period of more than 24 hours throughout which the temperature exceeded the maximum rated temperature of the sensor, or the data recorder was off scale. Visual inspections and checks of CPMS operation every 3 months, unless the CPMS has a redundant temperature sensor. Select a representative measurement location.
Flow Rate	±2 percent over the normal range of flow measured or 1.9 liters per minute (0.5 gallons per minute), whichever is greater, for liquid flow rate. ±2 percent over the normal range of flow measured or 28 liters per minute (10 cubic feet per minute), whichever is greater, for gas flow rate. ±2 percent over the normal range measured for mass flow rate.	Performance evaluation annually and following any period of more than 24 hours throughout which the flow rate exceeded the maximum rated flow rate of the sensor, or the data recorder was off scale. Checks of all mechanical connections for leakage monthly. Visual inspections and checks of CPMS operation every 3 months, unless the CPMS has a redundant flow sensor. Select a representative measurement location where swirling flow or abnormal velocity distributions due to upstream and downstream disturbances at the point of measurement are minimized.
pH	±0.2 pH units.	Performance check daily. Performance evaluation, including a two-point calibration with one of the two buffer solutions having a pH within 1 of the pH of the operating limit, every 3 months. Visual inspections and checks of CPMS operation monthly, unless the CPMS has a redundant pH sensor. Select a measurement location that provides a representative sample of absorber effluent and that ensures the fluid is properly mixed.

TABLE 4 TO SUBPART M OF PART 65—CALIBRATION AND QUALITY CONTROL REQUIREMENTS FOR CPMS—Continued

If you monitor this parameter . . .	Your accuracy requirements are . . .	Your calibration requirements are . . .
Pressure	±1 percent over the normal range measured or 0.12 kilopascals (0.5 inches of water column), whichever is greater.	Checks for obstructions at least once each process operating day (*e.g.,* pressure tap pluggage). Performance evaluation annually and following any period of more than 24 hours throughout which the pressure exceeded the maximum rated pressure of the sensor, or the data recorder was off scale. Checks of all mechanical connections for leakage monthly. Visual inspection of all components for integrity, oxidation and galvanic corrosion every 3 months, unless the CPMS has a redundant pressure sensor. Select a representative measurement location that minimizes or eliminates pulsating pressure, vibration, and internal and external corrosion.
Sorbent Injection Rate	±5 percent over the normal range measured	Performance evaluation annually. Visual inspections and checks of CPMS operation every 3 months, unless the CPMS has a redundant sensor. Select a representative measurement location that provides measurement of total sorbent injection.

TABLE 5 TO SUBPART M OF PART 65—METHODS AND PROCEDURES FOR CONDUCTING PERFORMANCE TESTS FOR VENT STREAMS

For each control device used to meet . . .	You must use . . .	And you must . . .
Specific organic regulated material compound outlet concentration or percent reduction emission limit specified in a referencing subpart.	Method 18 at 40 CFR part 60, appendix A–6; or. ASTM D6420–99(2010) Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry. (incorporated by reference, see § 65.265), under the conditions specified in § 65.825(a); or Method 320 at 40 CFR part 63, appendix A under the conditions specified in § 65.825(c).	Follow the exceptions provided in § 65.825(d) and (e), as applicable.
A total organic compounds emission limit (either outlet concentration or percent reduction) specified in a referencing subpart.	Method 25A at 40 CFR part 60, appendix A–7 under the conditions specified in § 65.825(b).	Follow the exceptions provided in § 65.825(d) and (e), as applicable.
A metal regulated material emission limit specified in a referencing subpart.	Method 29 at 40 CFR part 60, appendix A–8.	
A filterable particulate matter emission limit specified in a referencing subpart.	Method 5 at 40 CFR part 60, appendix A–3.	
A total (filterable plus condensable) particulate matter emission limit specified in a referencing subpart.	Method 5 at 40 CFR part 60, appendix A–3 and Method 202 at 40 CFR part 51, appendix M.	
A total (filterable plus condensable) fine particulate matter ($PM_{2.5}$) emission limit specified in a referencing subpart.	Methods 201A and 202 at 40 CFR part 51, appendix M, if no entrained water droplets exist in the stack. If the stack contains entrained water droplets (e.g., immediately after a wet scrubber), use Method 5 at 40 CFR part 60, appendix A–3 with a filter temperature of 320 degrees Fahrenheit ± 25 degrees Fahrenheit and Method 202 at 40 CFR part 51, appendix M.	
A hydrogen halide and halogen emission limit specified in a referencing subpart (either outlet concentration or percent reduction).	Method 26 at 40 CFR part 60, appendix A–8, under conditions specified in § 65.825(f); or Method 26A at 40 CFR part 60, appendix A–8; or Method 320 at 40 CFR part 63, appendix A under the conditions specified in § 65.825(c).	
Halogen atom mass emission rate or percent reduction emission limit specified in a referencing subpart.	Method 26 at 40 CFR part 60, under conditions specified in § 65.825(f); or 26A at 40 CFR part 60, appendix A–8; or Method 320 at 40 CFR part 63, appendix A under the conditions specified in § 65.825(c); and Method 18 at 40 CFR part 60, appendix A–6.	
A dioxins/furans emission limit specified in a referencing subpart.	Method 23 at 40 CFR part 60, appendix A–7.	

TABLE 5 TO SUBPART M OF PART 65—METHODS AND PROCEDURES FOR CONDUCTING PERFORMANCE TESTS FOR VENT STREAMS—Continued

For each control device used to meet . . .	You must use . . .	And you must . . .
An emission limit for a batch and/or continuous process operation.	Method 2, 2A, 2C, 2D, 2F or 2G at 40 CFR part 60, appendix A–2.	Determine gas velocity and volumetric flow rate.
	Method 3, 3A or 3B at 40 CFR part 60, appendix A–2; or ANSI/ASME PTC 19.10–1981, Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus] (incorporated by reference, see § 65.265).	Conduct gas molecular weight analysis and correction to standard percent oxygen (if applicable).
	Method 4 at 40 CFR part 60, appendix A–3 ...	Measure gas moisture content.

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Part IV

Environmental Protection Agency

40 CFR Part 52
Approval and Promulgation of Implementation Plans; State of Colorado; Regional Haze State Implementation Plan; Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R08–OAR–2011–0770, FRL–9650–7]

Approval and Promulgation of Implementation Plans; State of Colorado; Regional Haze State Implementation Plan

AGENCY: Environmental Protection Agency.

ACTION: Proposed rule.

SUMMARY: EPA is proposing to approve a State implementation plan (SIP) revision submitted by the State of Colorado on May 25, 2011 that addresses regional haze (RH). EPA is proposing to determine that the plan submitted by Colorado satisfies the requirements of the Clean Air Act (CAA or ''the Act'') and our rules that require states to prevent any future and remedy any existing man-made impairment of visibility in mandatory Class I areas caused by emissions of air pollutants from numerous sources located over a wide geographic area (also referred to as the ''regional haze program''). States are required to assure reasonable progress toward the national goal of achieving natural visibility conditions in Class I areas. EPA is taking this action pursuant to section 110 of the CAA.

DATES: Written comments must be received at the address below on or before May 25, 2012.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–R08–OAR–2011–0770, by one of the following methods:

- *http://www.regulations.gov.* Follow the on-line instructions for submitting comments.
- *Email: dygowski.laurel@epa.gov.*
- *Fax:* (303) 312–6064 (please alert the individual listed in the **FOR FURTHER INFORMATION CONTACT** if you are faxing comments).
- *Mail:* Carl Daly, Director, Air Program, Environmental Protection Agency (EPA), Region 8, Mailcode 8P–AR, 1595 Wynkoop Street, Denver, Colorado 80202–1129.
- *Hand Delivery:* Carl Daly, Director, Air Program, Environmental Protection Agency (EPA), Region 8, Mailcode 8P–AR, 1595 Wynkoop, Denver, Colorado 80202–1129. Such deliveries are only accepted Monday through Friday, 8 a.m. to 4:30 p.m., excluding Federal holidays. Special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA–R08–OAR–2011–0770. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at *http://www.regulations.gov,* including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through *http://www.regulations.gov* or email. The *http://www.regulations.gov* Web site is an ''anonymous access'' system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to EPA, without going through *http://www.regulations.gov,* your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional instructions on submitting comments, go to Section I, ''General Information'' of the **SUPPLEMENTARY INFORMATION** section of this document.

Docket: All documents in the docket are listed in the *http://www.regulations.gov* index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly-available docket materials are available either electronically in *http://www.regulations.gov* or in hard copy at the Air Program, Environmental Protection Agency (EPA), Region 8, Mailcode 8P–AR, 1595 Wynkoop, Denver, Colorado 80202–1129. EPA requests that if at all possible, you contact the individual listed in the **FOR FURTHER INFORMATION CONTACT** section to view the hard copy of the docket. You may view the hard copy of the docket Monday through Friday, 8 a.m. to 4 p.m., excluding Federal holidays.

FOR FURTHER INFORMATION CONTACT: Laurel Dygowski, Air Program, U.S. Environmental Protection Agency, Region 8, Mailcode 8P–AR, 1595 Wynkoop, Denver, Colorado 80202–1129, (303) 312–6144, *dygowski.laurel@epa.gov.*

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Definitions

For the purpose of this document, we are giving meaning to certain words or initials as follows:

i. The words or initials *Act* or *CAA* mean or refer to the Clean Air Act, unless the context indicates otherwise.

ii. The initials *BACT* mean or refer to Best Available Control Technology.

iii. The initials *BART* mean or refer to Best Available Retrofit Technology.

iv. The initials *CAMx* mean or refer to Comprehensive Air Quality Model.

v. The initials *CMAQ* mean or refer to Community Multi-Scale Air Quality modeling system.

vi. The initials *CEMS* mean or refer to continuous emission monitoring systems.

vii. The words *Colorado* and *State* mean the State of Colorado.

viii. The initials *EC* mean or refer to elemental carbon.

ix. The initials *EGUs* mean or refer to Electric Generating Units.

x. The words *EPA, we, us* or *our* mean or refer to the United States Environmental Protection Agency.

xi. The initials *FETS* mean or refer to the Fire Emission Tracking System.

xii. The initials *FGD* mean or refer to flue gas desulfurization.

xiii. The initials *FGR* mean or refer to external flue gas recirculation.

xiv. The initials *FLMs* mean or refer to Federal Land Managers.

xv. The initials *FS* mean or refer to the U.S. Forest Service.

xvi. The initials *IMPROVE* mean or refer to Interagency Monitoring of Protected Visual Environments monitoring network.

xvii. The initials *IWAQM* mean or refer to Interagency Workgroup on Air Quality Modeling.

xviii. The initials *LB* mean or refer to lean burn.

xix. The initials *LNB* mean or refer to low NO_X burner.

xx. The initials *LTS* mean or refer to Long-Term Strategy.

xxi. The initials *MACT* mean or refer to Maximum Achievable Control Technology.

xxii. The initials NH_3 mean or refer to ammonia.

xxiii. The initials NO_X mean or refer to nitrogen oxides.

xxiv. The initials *NPS* mean or refer to National Park Service.

xxv. The initials *OC* mean or refer to organic carbon.

xxvi. The initials *OFA* mean or refer to overfire air.

xxvii. The initials $PM_{2.5}$ mean or refer to particulate matter with an aerodynamic diameter of less than 2.5 micrometers.

xxviii. The initials PM_{10} mean or refer to particulate matter with an aerodynamic diameter of less than 10 micrometers.

xxix. The initials *PSAT* mean or refer to Particle Source Apportionment Technology

xxx. The initials *PSD* mean or refer to Prevention of Signification Deterioration.

xxxi. The initials *RAVI* mean or refer to Reasonably Attributable Visibility Impairment.

xxxii. The initials *RB* mean or refer to rich burn.

xxxiii. The initials *RH* mean or refer to regional haze.

xxxiv. The initials *RH SIP* mean or refer to Colorado's RH State Implementation Plan.

xxxv. The initials *RHR* mean or refer to the Regional Haze Rule.

xxxvi. The initials *RMC* mean or refer to the Regional Modeling Center at the University of California Riverside.

xxxvii. The initials *ROFA* mean or refer to rotating overfire air.

xxxviii. The initials *RP* mean or refer to Reasonable Progress.

xxxix. The initials *RPGs* mean or refer to Reasonable Progress Goals.

xl. The initials *RPOs* mean or refer to regional planning organizations.

xli. The initials *RRI* mean or refer to rich reagent injection.

xlii. The initials *SCR* mean or refer to selective catalytic reduction.

xliii. The initials *SIP* mean or refer to State Implementation Plan.

xliv. The initials *SNCR* mean or refer to selective non-catalytic reduction.

xlv. The initials SO_2 mean or refer to sulfur dioxide.

xlvi. The initials *SOFA* mean or refer to separated overfire air.

xlvii. The initials *TSD* mean or refer to Technical Support Document.

xlviii. The initials *URP* mean or refer to Uniform Rate of Progress.

xlix. The initials *VOC* mean or refer to volatile organic compounds.

l. The initials *WEP* mean or refer to Weighted Emissions Potential.

li. The initials *WRAP* mean or refer to the Western Regional Air Partnership.

I. General Information

A. What should I consider as I prepare my comments for EPA?

1. *Submitting CBI.* Do not submit CBI to EPA through *http://www.regulations.gov* or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD ROM that you mail to EPA, mark the outside of the disk or CD ROM as CBI and then identify electronically within the disk or CD ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

2. *Tips for Preparing Your Comments.* When submitting comments, remember to:

a. Identify the rulemaking by docket number and other identifying information (subject heading, **Federal Register** date and page number).

b. Follow directions—The agency may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.

c. Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.

d. Describe any assumptions and provide any technical information and/or data that you used.

e. If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.

f. Provide specific examples to illustrate your concerns, and suggest alternatives.

g. Explain your views as clearly as possible, avoiding the use of profanity or personal threats.

h. Make sure to submit your comments by the comment period deadline identified.

II. What action is EPA proposing to take?

EPA is proposing to approve a SIP revision submitted by the State of Colorado on May 25, 2011 that addresses RH. In so doing, EPA is proposing to determine that the plan submitted by Colorado satisfies the requirements of 40 CFR 51.308.

III. Background

A. Regional Haze

RH is visibility impairment that is produced by a multitude of sources and

activities which are located across a broad geographic area and emit fine particles ($PM_{2.5}$) (e.g., sulfates, nitrates, organic carbon (OC), elemental carbon (EC), and soil dust), and their precursors (e.g., sulfur dioxide (SO_2), nitrogen oxides (NO_X), and in some cases, ammonia (NH_3) and volatile organic compounds (VOC)). Fine particle precursors react in the atmosphere to form $PM_{2.5}$, which impairs visibility by scattering and absorbing light. Visibility impairment reduces the clarity, color, and visible distance that one can see. $PM_{2.5}$ can also cause serious health effects and mortality in humans and contributes to environmental effects such as acid deposition and eutrophication.

Data from the existing visibility monitoring network, the ''Interagency Monitoring of Protected Visual Environments'' (IMPROVE) monitoring network, show that visibility impairment caused by air pollution occurs virtually all the time at most national park and wilderness areas. The average visual range [1] in many Class I areas (*i.e.,* national parks and memorial parks, wilderness areas, and international parks meeting certain size criteria) in the western United States is 100–150 kilometers, or about one-half to two-thirds of the visual range that would exist without anthropogenic air pollution. In most of the eastern Class I areas of the United States, the average visual range is less than 30 kilometers, or about one-fifth of the visual range that would exist under estimated natural conditions. 64 FR 35715 (July 1, 1999).

B. Requirements of the CAA and EPA's Regional Haze Rule (RHR)

In section 169A of the 1977 Amendments to the CAA, Congress created a program for protecting visibility in the nation's national parks and wilderness areas. This section of the CAA establishes as a national goal the ''prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Class I Federal areas [2] which impairment results from manmade air pollution.'' On December 2, 1980, EPA promulgated regulations to address visibility impairment in Class I areas that is ''reasonably attributable'' to a single source or small group of sources, *i.e.,* ''reasonably attributable visibility impairment.'' 45 FR 80084. These regulations represented the first phase in addressing visibility impairment. EPA deferred action on RH that emanates from a variety of sources until monitoring, modeling and scientific knowledge about the relationships between pollutants and visibility impairment were improved.

Congress added section 169B to the CAA in 1990 to address RH issues. EPA promulgated a rule to address RH on July 1, 1999. 64 FR 35714 (July 1, 1999), codified at 40 CFR part 51, subpart P. The RHR revised the existing visibility regulations to integrate into the regulation provisions addressing RH impairment and established a comprehensive visibility protection program for Class I areas. The requirements for RH, found at 40 CFR 51.308 and 51.309, are included in EPA's visibility protection regulations at 40 CFR 51.300–309. Some of the main elements of the RH requirements are summarized in section III of this preamble. The requirement to submit a RH SIP applies to all 50 states, the District of Columbia and the Virgin Islands. 40 CFR 51.308(b) requires states to submit the first implementation plan addressing RH visibility impairment no later than December 17, 2007.[3]

Few states submitted a RH SIP prior to the December 17, 2007 deadline, and on January 15, 2009, EPA found that 37 states (including Colorado), the District of Columbia, and the Virgin Islands, had failed to submit SIPs addressing the RH requirements. 74 FR 2392. Once EPA has found that a state has failed to make a required submission, EPA is required to promulgate a FIP within two years unless the state submits a SIP and the Agency approves it within the two-year period. CAA § 110(c)(1).

C. Roles of Agencies in Addressing Regional Haze

Successful implementation of the RH program will require long-term regional coordination among states, tribal governments and various federal agencies. As noted above, pollution affecting the air quality in Class I areas can be transported over long distances, even hundreds of kilometers. Therefore, to effectively address the problem of visibility impairment in Class I areas, states need to develop strategies in coordination with one another, taking into account the effect of emissions from one jurisdiction on the air quality in another.

Because the pollutants that lead to RH can originate from sources located across broad geographic areas, EPA has encouraged the states and tribes across the United States to address visibility impairment from a regional perspective. Five regional planning organizations (RPOs) were developed to address RH and related issues. The RPOs first evaluated technical information to better understand how their states and tribes impact Class I areas across the country, and then pursued the development of regional strategies to reduce emissions of particulate matter (PM) and other pollutants leading to RH.

The Western Regional Air Partnership (WRAP) RPO is a collaborative effort of state governments, tribal governments, and various federal agencies established to initiate and coordinate activities associated with the management of RH, visibility and other air quality issues in the western United States. WRAP member State governments include: Alaska, Arizona, California, Colorado, Idaho, Montana, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming. Tribal members include Campo Band of Kumeyaay Indians, Confederated Salish and Kootenai Tribes, Cortina Indian Rancheria, Hopi Tribe, Hualapai Nation of the Grand Canyon, Native Village of Shungnak, Nez Perce Tribe, Northern Cheyenne Tribe, Pueblo of Acoma, Pueblo of San Felipe, and Shoshone-Bannock Tribes of Fort Hall.

IV. Requirements for Regional Haze SIPs

The following is a summary of the requirements of the RHR. See 40 CFR 51.308 for further detail regarding the requirements of the rule.

A. The CAA and the Regional Haze Rule

RH SIPs must assure reasonable progress (RP) towards the national goal of achieving natural visibility conditions in Class I areas. Section 169A of the CAA and EPA's implementing regulations require states to establish long-term strategies for making RP toward meeting this goal. Implementation plans must also give

[1] Visual range is the greatest distance, in kilometers or miles, at which a dark object can be viewed against the sky.

[2] Areas designated as mandatory Class I Federal areas consist of national parks exceeding 6000 acres, wilderness areas and national memorial parks exceeding 5000 acres, and all international parks that were in existence on August 7, 1977. 42 U.S.C. 7472(a). In accordance with section 169A of the CAA, EPA, in consultation with the Department of Interior, promulgated a list of 156 areas where visibility is identified as an important value. 44 FR 69122 (November 30, 1979). The extent of a mandatory Class I area includes subsequent changes in boundaries, such as park expansions. 42 U.S.C. 7472(a). Although states and tribes may designate as Class I additional areas which they consider to have visibility as an important value, the requirements of the visibility program set forth in section 169A of the CAA apply only to ''mandatory Class I Federal areas.'' Each mandatory Class I Federal area is the responsibility of a ''Federal Land Manager.'' 42 U.S.C. 7602(i). When we use the term ''Class I area'' in this action, we mean a ''mandatory Class I Federal area.''

[3] EPA's regional haze regulations require subsequent updates to the regional haze SIPs. 40 CFR 51.308(g)–(i).

specific attention to certain stationary sources that were in existence on August 7, 1977, but were not in operation before August 7, 1962, and require these sources, where appropriate, to install BART controls for the purpose of eliminating or reducing visibility impairment. The specific RH SIP requirements are discussed in further detail below.

B. Determination of Baseline, Natural, and Current Visibility Conditions

The RHR establishes the deciview (dv) as the principal metric or unit for expressing visibility. See 70 FR 39104, 39118. This visibility metric expresses uniform changes in the degree of haze in terms of common increments across the entire range of visibility conditions, from pristine to extremely hazy conditions. Visibility expressed in dvs is determined by using air quality measurements to estimate light extinction and then transforming the value of light extinction using a logarithm function. The dv is a more useful measure for tracking progress in improving visibility than light extinction itself because each dv change is an equal incremental change in visibility perceived by the human eye. Most people can detect a change in visibility at one dv.[4]

The dv is used in expressing Reasonable Progress Goals (RPGs) (which are interim visibility goals towards meeting the national visibility goal), defining baseline, current, and natural conditions, and tracking changes in visibility. The RH SIPs must contain measures that ensure ''reasonable progress'' toward the national goal of preventing and remedying visibility impairment in Class I areas caused by anthropogenic air pollution by reducing anthropogenic emissions that cause RH. The national goal is a return to natural conditions, i.e., anthropogenic sources of air pollution would no longer impair visibility in Class I areas.

To track changes in visibility over time at each of the 156 Class I areas covered by the visibility program (40 CFR 81.401–437), and as part of the process for determining RP, states must calculate the degree of existing visibility impairment at each Class I area at the time of each RH SIP submittal and periodically review progress every five years midway through each 10-year implementation period. To do this, the RHR requires states to determine the degree of impairment (in dvs) for the average of the 20 percent least impaired (''best'') and 20 percent most impaired (''worst'') visibility days over a specified time period at each of their Class I areas. In addition, states must also develop an estimate of natural visibility conditions for the purpose of comparing progress toward the national goal. Natural visibility is determined by estimating the natural concentrations of pollutants that cause visibility impairment and then calculating total light extinction based on those estimates. We have provided guidance to states regarding how to calculate baseline, natural and current visibility conditions.[5]

For the first RH SIPs that were due by December 17, 2007, ''baseline visibility conditions'' were the starting points for assessing ''current'' visibility impairment. Baseline visibility conditions represent the degree of visibility impairment for the 20 percent least impaired days and 20 percent most impaired days for each calendar year from 2000 to 2004. Using monitoring data for 2000 through 2004, states are required to calculate the average degree of visibility impairment for each Class I area, based on the average of annual values over the five-year period. The comparison of initial baseline visibility conditions to natural visibility conditions indicates the amount of improvement necessary to attain natural visibility, while the future comparison of baseline conditions to the then current conditions will indicate the amount of progress made. In general, the 2000–2004 baseline period is considered the time from which improvement in visibility is measured.

C. Determination of Reasonable Progress Goals

The vehicle for ensuring continuing progress towards achieving the natural visibility goal is the submission of a series of RH SIPs from the states that establish two RPGs (i.e., two distinct goals, one for the ''best'' and one for the ''worst'' days) for every Class I area for each (approximately) 10-year implementation period. See 40 CFR 51.308(d), (f). The RHR does not mandate specific milestones or rates of progress, but instead calls for states to establish goals that provide for ''reasonable progress'' toward achieving natural visibility conditions. In setting RPGs, states must provide for an improvement in visibility for the most impaired days over the (approximately) 10-year period of the SIP, and ensure no degradation in visibility for the least impaired days over the same period. *Id.*

In establishing RPGs, states are required to consider the following factors established in section 169A of the CAA and in our RHR at 40 CFR 51.308(d)(1)(i)(A): (1) The costs of compliance; (2) the time necessary for compliance; (3) the energy and non-air quality environmental impacts of compliance; and (4) the remaining useful life of any potentially affected sources. States must demonstrate in their SIPs how these factors are considered when selecting the RPGs for the best and worst days for each applicable Class I area. In setting the RPGs, states must also consider the rate of progress needed to reach natural visibility conditions by 2064 (referred to as the ''uniform rate of progress'' (URP) or the ''glidepath'') and the emission reduction measures needed to achieve that rate of progress over the 10-year period of the SIP. Uniform progress towards achievement of natural conditions by the year 2064 represents a rate of progress, which states are to use for analytical comparison to the amount of progress they expect to achieve. In setting RPGs, each state with one or more Class I areas (''Class I state'') must also consult with potentially ''contributing states,'' i.e., other nearby states with emission sources that may be affecting visibility impairment at the state's Class I areas. 40 CFR 51.308(d)(1)(iv). In determining whether a state's goals for visibility improvement provide for RP toward natural visibility conditions, EPA is required to evaluate the demonstrations developed by the state pursuant to paragraphs 40 CFR 51.308(d)(1)(i) and (d)(1)(ii). 40 CFR 51.308(d)(1)(iii).

D. Best Available Retrofit Technology (BART)

Section 169A of the CAA directs states to evaluate the use of retrofit controls at certain larger, often uncontrolled, older stationary sources in order to address visibility impacts from these sources. Specifically, section 169A(b)(2)(A) of the CAA requires states to revise their SIPs to contain such measures as may be necessary to make RP towards the natural visibility goal, including a requirement that certain categories of existing major stationary

[4] The preamble to the RHR provides additional details about the dv. 64 FR 35714, 35725 (July 1, 1999).

[5] *Guidance for Estimating Natural Visibility Conditions Under the Regional Haze Rule,* September 2003, EPA–454/B–03–005, available at *http://www.epa.gov/ttncaaa1/t1/memoranda/Regional Haze _envcurhr_gd.pdf,* (hereinafter referred to as ''our 2003 Natural Visibility Guidance''); and *Guidance for Tracking Progress Under the Regional Haze Rule,* (September 2003, EPA–454/B–03–004, available at *http://www.epa.gov/ttncaaa1/t1/memoranda/rh_tpurhr_gd.pdf,* (hereinafter referred to as our ''2003 Tracking Progress Guidance'').

sources[6] built between 1962 and 1977 procure, install, and operate the ''Best Available Retrofit Technology'' as determined by the state. Under the RHR, states are directed to conduct BART determinations for such ''BART-eligible'' sources that may be anticipated to cause or contribute to any visibility impairment in a Class I area. Rather than requiring source-specific BART controls, states also have the flexibility to adopt an emissions trading program or other alternative program as long as the alternative provides greater RP towards improving visibility than BART.

On July 6, 2005, EPA published the *Guidelines for BART Determinations Under the Regional Haze Rule* at appendix Y to 40 CFR part 51 (hereinafter referred to as the ''BART Guidelines'') to assist states in determining which of their sources should be subject to the BART requirements and in determining appropriate emission limits for each applicable source. 70 FR 39104. In making a BART determination for a fossil fuel-fired electric generating plant with a total generating capacity in excess of 750 megawatts (MW), a state must use the approach set forth in the BART Guidelines. A state is encouraged, but not required, to follow the BART Guidelines in making BART determinations for other types of sources. Regardless of source size or type, a state must meet the requirements of the CAA and our regulations for selection of BART, and the state's BART analysis and determination must be reasonable in light of the overarching purpose of the RH program.

The process of establishing BART emission limitations can be logically broken down into three steps: first, states identify those sources which meet the definition of ''BART-eligible source'' set forth in 40 CFR 51.301;[7] second, states determine which of such sources ''emits any air pollutant which may reasonably be anticipated to cause or contribute to any impairment of visibility in any such area'' (a source which fits this description is ''subject to BART''); and third, for each source subject to BART, states then identify the best available type and level of control for reducing emissions.

States must address all visibility-impairing pollutants emitted by a source in the BART determination process. The most significant visibility impairing pollutants are SO_2, NO_X, and PM. EPA has stated that states should use their best judgment in determining whether VOC or NH_3 compounds impair visibility in Class I areas.

Under the BART Guidelines, states may select an exemption threshold value for their BART modeling, below which a BART-eligible source would not be expected to cause or contribute to visibility impairment in any Class I area. The state must document this exemption threshold value in the SIP and must state the basis for its selection of that value. Any source with emissions that model above the threshold value would be subject to a BART determination review. The BART Guidelines acknowledge varying circumstances affecting different Class I areas. States should consider the number of emission sources affecting the Class I areas at issue and the magnitude of the individual sources' impacts. Any exemption threshold set by the state should not be higher than 0.5 dv. 40 CFR part 51, appendix Y, section III.A.1.

In their SIPs, states must identify the sources that are subject to BART and document their BART control determination analyses for such sources. In making their BART determinations, section 169A(g)(2) of the CAA requires that states consider the following factors when evaluating potential control technologies: (1) The costs of compliance; (2) the energy and non-air quality environmental impacts of compliance; (3) any existing pollution control technology in use at the source; (4) the remaining useful life of the source; and (5) the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology.

A RH SIP must include source-specific BART emission limits and compliance schedules for each source subject to BART. Once a state has made its BART determination, the BART controls must be installed and in operation as expeditiously as practicable, but no later than five years after the date of EPA approval of the RH SIP. CAA section 169(g)(4) and 40 CFR 51.308(e)(1)(iv). In addition to what is required by the RHR, general SIP requirements mandate that the SIP must also include all regulatory requirements related to monitoring, recordkeeping, and reporting for the BART controls on the source. See CAA section 110(a). As noted above, the RHR allows states to implement an alternative program in lieu of BART so long as the alternative program can be demonstrated to achieve greater RP toward the national visibility goal than would BART.

E. Long-Term Strategy (LTS)

Consistent with the requirement in section 169A(b) of the CAA that states include in their RH SIP a 10 to 15 year strategy for making RP, section 51.308(d)(3) of the RHR requires that states include a LTS in their RH SIPs. The LTS is the compilation of all control measures a state will use during the implementation period of the specific SIP submittal to meet applicable RPGs. The LTS must include ''enforceable emissions limitations, compliance schedules, and other measures as necessary to achieve the reasonable progress goals'' for all Class I areas within, or affected by emissions from, the state. 40 CFR 51.308(d)(3).

When a state's emissions are reasonably anticipated to cause or contribute to visibility impairment in a Class I area located in another state, the RHR requires the impacted state to coordinate with the contributing states in order to develop coordinated emissions management strategies. 40 CFR 51.308(d)(3)(i). In such cases, the contributing state must demonstrate that it has included, in its SIP, all measures necessary to obtain its share of the emission reductions needed to meet the RPGs for the Class I area. *Id.* at (d)(3)(ii). The RPOs have provided forums for significant interstate consultation, but additional consultations between states may be required to sufficiently address interstate visibility issues. This is especially true where two states belong to different RPOs.

States should consider all types of anthropogenic sources of visibility impairment in developing their LTS, including stationary, minor, mobile, and area sources. At a minimum, states must describe how each of the following seven factors listed below are taken into account in developing their LTS: (1) Emission reductions due to ongoing air pollution control programs, including measures to address RAVI; (2) measures to mitigate the impacts of construction activities; (3) emissions limitations and schedules for compliance to achieve the RPG; (4) source retirement and replacement schedules; (5) smoke management techniques for agricultural and forestry management purposes including plans as currently exist within the state for these purposes; (6) enforceability of emissions limitations and control measures; and (7) the anticipated net effect on visibility due to projected changes in point, area, and mobile source emissions over the period

[6] The set of ''major stationary sources'' potentially subject to BART is listed in CAA section 169A(g)(7).

[7] BART-eligible sources are those sources that have the potential to emit 250 tons or more of a visibility-impairing air pollutant, were not in operation prior to August 7, 1962, but were in existence on August 7, 1977, and whose operations fall within one or more of 26 specifically listed source categories. 40 CFR 51.301.

addressed by the LTS. 40 CFR 51.308(d)(3)(v).

F. Coordinating Regional Haze and Reasonably Attributable Visibility Impairment (RAVI)

As part of the RHR, EPA revised 40 CFR 51.306(c) regarding the LTS for RAVI to require that the RAVI plan must provide for a periodic review and SIP revision not less frequently than every three years until the date of submission of the state's first plan addressing RH visibility impairment, which was due December 17, 2007, in accordance with 40 CFR 51.308(b) and (c). On or before this date, the state must revise its plan to provide for review and revision of a coordinated LTS for addressing RAVI and RH, and the state must submit the first such coordinated LTS with its first RH SIP. Future coordinated LTS's, and periodic progress reports evaluating progress towards RPGs, must be submitted consistent with the schedule for SIP submission and periodic progress reports set forth in 40 CFR 51.308(f) and 51.308(g), respectively. The periodic review of a state's LTS must report on both RH and RAVI impairment and must be submitted to EPA as a SIP revision.

G. Monitoring Strategy and Other Implementation Plan Requirements

Section 51.308(d)(4) of the RHR includes the requirement for a monitoring strategy for measuring, characterizing, and reporting of RH visibility impairment that is representative of all mandatory Class I Federal areas within the state. The strategy must be coordinated with the monitoring strategy required in section 51.305 for RAVI. Compliance with this requirement may be met through ''participation'' in the IMPROVE network, i.e., review and use of monitoring data from the network. The monitoring strategy is due with the first RH SIP, and it must be reviewed every five years. The monitoring strategy must also provide for additional monitoring sites if the IMPROVE network is not sufficient to determine whether RPGs will be met.

The SIP must also provide for the following:

- Procedures for using monitoring data and other information in a state with mandatory Class I areas to determine the contribution of emissions from within the state to RH visibility impairment at Class I areas both within and outside the state;
- Procedures for using monitoring data and other information in a state with no mandatory Class I areas to determine the contribution of emissions from within the state to RH visibility impairment at Class I areas in other states;
- Reporting of all visibility monitoring data to the Administrator at least annually for each Class I area in the state, and where possible, in electronic format;
- Developing a statewide inventory of emissions of pollutants that are reasonably anticipated to cause or contribute to visibility impairment in any Class I area. The inventory must include emissions for a baseline year, emissions for the most recent year for which data are available, and estimates of future projected emissions. A state must also make a commitment to update the inventory periodically; and
- Other elements, including reporting, recordkeeping, and other measures necessary to assess and report on visibility.

The RHR requires control strategies to cover an initial implementation period extending to the year 2018, with a comprehensive reassessment and revision of those strategies, as appropriate, every 10 years thereafter. Periodic SIP revisions must meet the core requirements of section 51.308(d) with the exception of BART. The requirement to evaluate sources for BART applies only to the first RH SIP. Facilities subject to BART must continue to comply with the BART provisions of section 51.308(e), as noted above. Periodic SIP revisions will assure that the statutory requirement of RP will continue to be met.

H. Consultation With States and Federal Land Managers (FLMs)

The RHR requires that states consult with FLMs before adopting and submitting their SIPs. 40 CFR 51.308(i). States must provide FLMs an opportunity for consultation, in person and at least 60 days prior to holding any public hearing on the SIP. This consultation must include the opportunity for the FLMs to discuss their assessment of impairment of visibility in any Class I area and to offer recommendations on the development of the RPGs and on the development and implementation of strategies to address visibility impairment. Further, a state must include in its SIP a description of how it addressed any comments provided by the FLMs. Finally, a SIP must provide procedures for continuing consultation between the state and FLMs regarding the state's visibility protection program, including development and review of SIP revisions, five-year progress reports, and the implementation of other programs having the potential to contribute to impairment of visibility in Class I areas.

V. EPA's Evaluation of Colorado's Regional Haze SIP

The State of Colorado submitted a revision to its SIP to address the requirements for RH on May 25, 2011. The following is a discussion of our evaluation of the revision.

A. Affected Class I Areas

Pursuant to 40 CFR 51.308(d), the State identified 12 mandatory Class I areas in Colorado: Black Canyon of the Gunnison National Park, Eagles Nest Wilderness Area, Flat Tops Wilderness Area, Great Sand Dunes National Park, La Garita Wilderness Area, Maroon Bells-Snowmass Wilderness Area, Mesa Verde National Park, Mount Zirkel Wilderness Area, Rawah Wilderness Area, Rocky Mountain National Park, Weminuche Wilderness Area, and West Elk Wilderness Area. The State developed and submitted as part of its RH SIP technical support documents (TSDs) for each of the Class I areas. The Class I area TSDs include a detailed description of each area, along with photographs, summaries of monitoring data, an overview of current visibility conditions, and sources of pollution.

The State also identified in the TSD areas outside of the State that modeling shows may be impacted from emissions from Colorado.[8] These areas include: Upper Buffalo Wilderness in Arkansas; Petrified Forest National Park, Grand Canyon National Park, and Sycamore Canyon Wilderness in Arizona; Hercules-Glade Wilderness in Missouri; San Pedro Parks Wilderness, Bandelier National Monument, and Wheeler Peak in New Mexico; Wichita Mountains National Wildlife Refuge in Oklahoma; Wind Cave National Park and Badlands National Park in South Dakota; Canyonlands National Park and Capitol Reef National Park in Utah; and Bridger Wilderness in Wyoming.

B. Baseline Visibility, Natural Visibility, and Uniform Rate of Progress

As required by 40 CFR 51.308(d)(2), Colorado determined baseline visibility, natural visibility, and the URP for each Class I area in the State. Natural background visibility, as defined in our 2003 Natural Visibility Guidance, is estimated by calculating the expected light extinction using default estimates of natural concentrations of fine particle components adjusted by site-specific estimates of humidity. This calculation uses the IMPROVE equation, which is a

[8] See Colorado TSD document titled *Colorado Visibility Impacts on nearby Class I Areas.*

formula for estimating light extinction from the estimated natural concentrations of fine particle components (or from components measured by the IMPROVE monitors). As documented in our 2003 Natural Visibility Guidance, EPA allows states to use ''refined'' or alternative approaches to this guidance to estimate the values that characterize the natural visibility conditions of Class I areas.

One alternative approach is to develop and justify the use of alternative estimates of natural concentrations of fine particle components. Another alternative is to use the ''new IMPROVE equation'' that was adopted for use by the IMPROVE Steering Committee in December 2005.[9] The purpose of this refinement to the ''old IMPROVE equation'' is to provide more accurate estimates of the various factors that affect the calculation of light extinction.

Colorado used the new IMPROVE equation to calculate natural conditions and baseline visibility. The natural condition for each Class I area represents the visibility goal expressed in dvs for the 20% worst days and the 20% best days that would exist if there were only naturally occurring visibility impairment. In accordance with 40 CFR 51.308(d)(2)(iii), the State calculated natural visibility conditions based on available monitoring information and appropriate data analysis techniques and in accordance with our 2003 Natural Visibility Guidance. The State also calculated the number of dvs by which baseline conditions exceed natural conditions at each of its Class I areas to meet the requirements of 40 CFR 51.308(d)(2)(iv)(A).

Colorado has established baseline visibility for the best and worst visibility days for each Class I area based on data from the IMPROVE monitoring sites. Each IMPROVE monitor collects particulate concentration data which are converted into reconstructed light extinction through a complex calculation using the IMPROVE equation (see Class I area TSDs for more information on reconstructed light extinction and the IMPROVE equation). Per 40 CFR 51.308(d)(2)(i), the State calculated baseline visibility using a five-year average (2000 to 2004) of IMROVE data for both the 20% best and 20% worst days. The State's baseline calculations were made in accordance with our 2003 Tracking Progress Guidance.

Pursuant to 40 CFR 51.308(d)(1)(i)(B), the State calculated the URP for each of its Class I areas. For the 20% worst days, the URP is the calculation of the dv reduction needed to achieve natural conditions by 2064. For the 20% worst days, the State calculated the URP in dvs per year using the following formula: URP = [Baseline Condition − Natural Condition]/60 years. In order to determine the uniform progress needed by 2018 to be on the path to achieving natural visibility conditions by 2064, the State multiplied the URP by the 14 years in the first planning period (2004–2018).

Table 1 shows the baseline visibility, natural conditions, and URP for each of the Class I areas.

TABLE 1—BASELINE VISIBILITY, NATURAL CONDITIONS, AND UNIFORM RATE OF PROGRESS FOR COLORADO CLASS I AREAS

Colorado class I areas	Monitor name	20% Worst Days					20% Best days
		2000–2004 Baseline (dv)	2018 URP (dv)	Reduction needed to reach 2018 URP (delta dv)	2064 Natural conditions (dv)	Delta Baseline—2064 Natural Conditions (dv)	2000–2004 Baseline (dv)
Great Sand Dunes National Park and Preserve	GRSA1	12.78	11.35	1.43	6.66	6.12	4.50
Mesa Verde National Park	MEVE1	13.03	11.58	1.45	6.81	6.22	4.32
Mount Zirkel and Rawah Wilderness Area	MOZI1	10.52	9.48	1.04	6.08	4.44	1.61
Rocky Mountain National Park	RMHQ1	13.83	12.27	1.56	7.15	6.68	2.29
Weminuche Wilderness, Black Canyon of Gunnison, and La Garita Wilderness	WEMI1	10.33	9.37	0.96	6.21	4.12	3.11
Eagles Nest Wilderness, Flat Tops Wilderness, Maroon Bells-Snowmass Wilderness, and West Elk Wilderness	WHRI1	9.61	8.78	0.83	6.06	3.55	0.70

We have reviewed Colorado's calculations of baseline visibility, natural conditions, and URP. We find they have been calculated correctly and are proposing to approve them.

C. BART Determinations

BART is an element of Colorado's LTS for the first implementation period. As discussed in more detail in section IV.D of this notice, the BART evaluation process consists of three components: (1) An identification of all the BART-eligible sources; (2) an assessment of whether those BART-eligible sources are in fact subject to BART; and (3) a determination of any BART controls. Colorado addressed these steps as follows:

1. BART Eligible Sources

The first step of a BART evaluation is to identify all the BART-eligible sources within the State's boundaries. Colorado identified the BART-eligible sources in Colorado by utilizing the approach set out in the BART Guidelines (70 FR 39158). This approach provides three criteria for identifying BART-eligible sources: (1) One or more emission units at the facility fit within one of the 26 categories listed in the BART Guidelines; (2) the emission unit or units began operation on or after August 6, 1962, and were in existence on August 6, 1977; and (3) combined potential emissions of any visibility-impairing pollutant from the units that meet the criteria in (1) and (2) are 250

[9] The IMPROVE program is a cooperative measurement effort governed by a steering committee composed of representatives from Federal agencies (including representatives from EPA and the FLMs) and regional planning organizations. The IMPROVE monitoring program was established in 1985 to aid the creation of Federal and State implementation plans for the protection of visibility in Class I areas. One of the objectives of IMPROVE is to identify chemical species and emission sources responsible for existing anthropogenic visibility impairment. The IMPROVE program has also been a key participant in visibility-related research, including the advancement of monitoring instrumentation, analysis techniques, visibility modeling, policy formulation and source attribution field studies.

tons or more per year. Colorado reviewed source permits and emission data from 2001–2003 to identify facilities in the BART source categories with potential emissions of 250 tons per year or more for any visibility-impairing pollutant from any unit or units that were in existence on August 7, 1977 and began operation on or after August 7, 1962. The BART Guidelines direct States to address SO_2, NO_X, and direct PM (including both coarse particulate matter (PM_{10}) and fine particulate matter ($PM_{2.5}$)) emissions as visibility-impairing pollutants and to exercise their ''best judgment to determine whether VOC or NH_3 emissions from a source are likely to have an impact on visibility in an area.'' (70 FR 39162).

The State analyzed the emissions from VOC and NH_3 from sources in the State. VOC is a precursor to OC. The State eliminated VOC from further consideration in the RH SIP as it determined statewide point source emissions of VOC constitute a negligible portion of the emission inventory for OC (3 tons per year (tpy)). Colorado also determined that statewide point sources of NH_3 emissions are small. The State's emission inventory for 2001–2003 shows that point sources emitted 453 tpy of NH_3, while total State NH_3 emissions are 67,686 tpy. Thus, the State has eliminated NH_3 from further consideration.[10] We have reviewed this information and propose to accept this determination.

Table 2 lists the 12 sources that Colorado determined were BART-eligible.

2. Sources Subject to BART

The second step of the BART evaluation is to identify those BART-eligible sources that may reasonably be anticipated to cause or contribute to any visibility impairment at any Class I area, i.e., those sources that are subject to BART. The BART Guidelines allow states to consider exempting some BART-eligible sources from further BART review because they may not reasonably be anticipated to cause or contribute to any visibility impairment in a Class I area. Consistent with the BART Guidelines, Colorado performed dispersion modeling on the BART-eligible sources to assess the extent of their contribution to visibility impairment at surrounding Class I areas.

a. Modeling Methodology

The BART Guidelines provide that states may use the CALPUFF[11] modeling system or another appropriate model to predict the visibility impacts from a single source on a Class I area and to, therefore, determine whether an individual source is anticipated to cause or contribute to impairment of visibility in Class I areas, i.e., ''is subject to BART.'' The Guidelines state that CALPUFF is the best regulatory modeling application currently available for predicting a single source's contribution to visibility impairment (70 FR 39162).

The BART Guidelines also recommend that states develop a modeling protocol for making individual source attributions, and suggest that states may want to consult with EPA and their RPO to address any issues prior to modeling. Colorado used the CALPUFF model for Colorado BART sources in accordance with a protocol it developed titled *CALMET/CALPUFF BART Protocol for Class I Federal Area Individual Source Attribution Visibility Impairment Modeling Analysis,* October 24, 2005, which was approved by EPA and is included in the Supporting and Related Materials section of the docket. The Colorado protocol follows recommendations for long-range transport described in appendix W to 40 CFR part 51, *Guideline on Air Quality Models,* and in EPA's *Interagency Workgroup on Air Quality Modeling (IWAQM) Phase 2 Summary Report and Recommendations for Modeling Long Range Transport Impacts* as recommended by the BART Guidelines. (40 CFR part 51, appendix Y, section III.A.3).

To determine if each BART-eligible source has a significant impact on visibility, Colorado used the CALPUFF model to estimate daily visibility impacts above estimated natural conditions at each Class I area within 300 km of any BART-eligible facility, based on maximum actual 24-hour emissions over a three year period (2000–2002).

b. Contribution Threshold

For states using modeling to determine the applicability of BART to single sources, the BART Guidelines note that the first step is to set a contribution threshold to assess whether the impact of a single source is sufficient to cause or contribute to visibility impairment at a Class I area. The BART Guidelines state that, ''[a] single source that is responsible for a 1.0 deciview change or more should be considered to 'cause' visibility impairment.'' (70 FR 39104, 39161). The BART Guidelines also state that ''the appropriate threshold for determining whether a source contributes to visibility impairment may reasonably differ across states,'' but, ''[a]s a general matter, any threshold that you use for determining whether a source 'contributes' to visibility impairment should not be higher than 0.5 deciviews.'' Id. Further, in setting a contribution threshold, states should ''consider the number of emissions sources affecting the Class I areas at issue and the magnitude of the individual sources' impacts.'' The Guidelines affirm that states are free to use a lower threshold if they conclude that the location of a large number of BART-eligible sources in proximity to a Class I area justifies this approach.

Colorado used a contribution threshold of 0.5 dvs for determining which sources are subject to BART. The State's decision was based on the following factors: 0.5 dvs equates to the 5% extinction threshold for new sources under the Prevention of Significant Deterioration (PSD) New Source Review rules, and 0.5 dvs represents the limit of perceptible change. Although we do not agree with Colorado that these factors are always the appropriate ones to consider in determining which BART-eligible sources should be subject to BART in Colorado, we propose to approve the State's threshold of 0.5 dvs based on our own evaluation, discussed below. As shown in Table 2 below, Colorado exempted three of the 12 BART-eligible sources in the State from further review under the BART requirements. These three sources are Lamar Light and Power, Suncor Denver Refinery, and Ray D. Nixon Unit 1. According to Colorado's modeling, each of these sources had a visibility impact less than 0.5 dvs. As shown in Table 2, the visibility impact attributable to each of these sources is 0.06, 0.48, and 0.24 dvs, respectively. Given the relatively limited combined impact on visibility from these three sources, we propose to agree with Colorado that 0.5 dvs is a reasonable threshold for determining

[10] More details on the State's emission inventory can be found in *Colorado Emission Inventories Plan 2002d and PRP 2018b* in the Supporting and Related Materials section of the docket.

[11] Note that our reference to CALPUFF encompasses the entire CALPUFF modeling system, which includes the CALMET, CALPUFF, and CALPOST models and other pre and post processors. The different versions of CALPUFF have corresponding versions of CALMET, CALPOST, etc. which may not be compatible with previous versions (e.g., the output from a newer version of CALMET may not be compatible with an older version of CALPUFF). The different versions of the CALPUFF modeling system are available from the model developer at *http://www.src.com/verio/download/download.htm.*

whether its BART-eligible sources are subject to BART.

Because our recommended modeling approach already incorporates choices that tend to lower peak daily visibility impact values,[12] our BART Guidelines state that a state should compare the 98th percentile (as opposed to the 90th or lower percentile) of CALPUFF modeling results against the ''contribution'' threshold established by the state for purposes of determining BART applicability. Colorado used a 98th percentile comparison that we find appropriate. Further explanation on use of the 98th versus 90th percentile value is provided at 70 FR 39121.

c. Sources Identified by Colorado as BART-Eligible and Subject to BART

Table 2 shows the sources that the State identified as BART-eligible and the results of the State's CALPUFF modeling. Colorado determined that the BART-eligible facilities with modeled impacts at all Class I areas less than 0.5 dvs were not subject to BART and those with impacts greater than 0.5 dvs were subject to BART (see Chapter 6.3 of the SIP).

TABLE 2—COLORADO BART-ELIGIBLE SOURCES AND SUBJECT-TO-BART MODELING RESULTS

Unit name	Owner	Source type	State modeling results—98th percentile delta-Dv	Subject to BART?
Cemex—Lyons Cement Kiln and Dryer	Cemex	Portland Cement	1.53	Yes.
CENC (Trigen-Colorado) Units 4 & 5	Colorado Energy Nations Company (CENC)	EGU	1.26	Yes.
Cherokee Station—Unit 4	Public Service Company of Colorado (PSCO).	EGU	1.46	Yes.
Comanche Station—Units 1 & 2	PSCO	EGU	0.7	Yes.
Craig Station—Units 1 & 2	Tri-State Generation and Transmission, Inc. (Tri-State).	EGU	2.69	Yes.
Hayden Station—Units 1 & 2	PSCO	EGU	2.54	Yes.
Lamar Light and Power—Unit 6	City of Lamar	EGU	0.06	No.
Martin Drake Power Plant—Units 5, 6, & 7	Colorado Springs Utilities (CSU)	EGU	1.04	Yes.
Pawnee Station—Unit 1	PSCO	EGU	1.19	Yes.
Ray D. Nixon Power Plant—Unit 1	CSU	EGU	[13] 0.48	No.
Suncor Denver Refinery	Suncor	Refinery	0.24	No.
Valmont Station—Unit 5	PSCO	EGU	1.59	Yes.

[13] The State of Colorado originally modeled an impact of 0.57 dvs for Ray D. Nixon Power Plant. The source submitted refined modeling that showed an impact of 0.48 dvs. Both the State and EPA agree with the refined modeling submitted by the source.

3. BART Determinations and Federally Enforceable Limits

The third step of a BART evaluation is to perform the BART analysis. The BART Guidelines (70 FR 39164) describe the BART analysis as consisting of the following five steps:

- Step 1: Identify All Available Retrofit Control Technologies;
- Step 2: Eliminate Technically Infeasible Options;
- Step 3: Evaluate Control Effectiveness of Remaining Control Technologies;
- Step 4: Evaluate Impacts and Document the Results; and
- Step 5: Evaluate Visibility Impacts.

In determining BART, the State must consider the five statutory factors in section 169A of the CAA: (1) The costs of compliance; (2) the energy and non-air quality environmental impacts of compliance; (3) any existing pollution control technology in use at the source; (4) the remaining useful life of the source; and (5) the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology. See also 40 CFR 51.308(e)(1)(ii)(A). The five-factor analysis occurs during steps 4 and 5 of the BART analysis.

Colorado performed BART determinations for all of the sources subject to BART for NO_X, SO_2, and PM. We find that Colorado adequately considered all five steps above in its BART determinations.

State NO_X Control Criteria

For NO_X, the State developed criteria to assist in the selection of post-combustion controls for BART. For the highest-performing NO_X post-combustion control options (i.e., selective catalytic reduction (SCR) systems for electric generating units) that do not exceed a cost of $5,000 per ton and which provide a modeled visibility benefit of 0.50 dv or greater at the primary Class I Area affected, the State views that level of control as generally reasonable for BART. For lesser-performing NO_X post-combustion control options (*e.g.,* selective non-catalytic reduction (SNCR) technologies for electric generating units) that do not exceed a cost of $5,000 per ton which provide a modeled visibility benefit of 0.20 dv or greater at the primary Class I Area affected, the State views that level of control as generally reasonable for BART.

EPA does not necessarily agree that the State's criteria for selecting NO_X controls would always be appropriate. First, the criteria appear to discriminate against SCR as a potential control option. Under the criteria, if the cost of SCR is under $5,000/ton and the modeled visibility benefit is 0.20 delta-dv or greater but less than 0.50 delta-dv, the State would reject SCR. Using the State's criteria, the State would find SNCR reasonable with the same $/ton and delta-dv values. We are not aware of a valid basis for applying different criteria to the two control options. In addition, we are aware of no basis for establishing benchmarks for post-combustion controls but not for other types of NO_X controls. The criteria may also preclude a reasonable weighing of the five factors where the delta dv benefit is over 0.5 but the cost is higher than $5,000/ton.

While we do not necessarily agree that the criteria used by the State would always be appropriate to select NO_X controls, we agree with the State's determinations for NO_X BART controls on the BART sources as discussed below.

[12] See our BART Guidelines, Section III.A.3.

SO_2 Controls—Wet and Dry Scrubbing

Scrubbing is one of the most common ways to control emissions of SO_2 from stationary sources. Scrubbing can consist of either wet flue gas desulfurization (FGD) or dry FGD. The State eliminated wet FGD from consideration as a BART control because of negative non-air quality environmental impacts. The main non-air quality environmental impact that the State identified for wet FGDs is very heavy water usage. Wet FGDs consume approximately 23% more water than dry FGDs depending on boiler size.[14] In Colorado, water law is based upon the doctrine of prior appropriation or ''first in time-first in right,'' and the priority date is established by the date the water was first put to a beneficial use. The State reasoned that, depending upon whether and when a power plant first secured a water appropriation and whether such appropriation is adequate to supply the demand, there may be insufficient water appropriations available in some areas of the State, particularly in the Front Range area, to accommodate the added demands of wet FGD controls. The State also found that the water demands of wet FGDs would compete for what is already a scarce resource needed for Colorado's domestic, agricultural, and industrial demands.

Generally, wet FGD controls can achieve a slightly higher level of SO_2 control than dry FGDs on a percent capture basis. Considering this, the State determined that the non-air quality environmental impacts outweigh any incremental improvement in SO_2 emission reductions that would result from the use of wet FGDs rather than dry FGDs (see Chapter 6.4.1.3 of the SIP). EPA is proposing that the State provided adequate justification to eliminate the consideration of wet FGDs as SO_2 BART controls.

a. Visibility Improvement Modeling

The BART Guidelines provide that states may use the CALPUFF modeling system or another appropriate model to determine the visibility improvement expected at a Class I area from potential BART control technologies applied to the source. Colorado performed CALPUFF modeling to determine the degree of visibility improvement expected at a Class I area based on the controls evaluated for BART for the subject-to-BART sources, with the exception of Cemex. For Cemex, the State relied on modeling submitted by the source based on a modeling protocol approved by the State.

The BART Guidelines also recommend that states develop a modeling protocol for modeling visibility improvement, and suggest that states may want to consult with EPA and their RPO to address any issues prior to modeling. Colorado used the CALPUFF model for Colorado BART sources in accordance with a protocol it developed titled Supplemental BART Analysis *CALPUFF Protocol for Class I Federal Area Visibility Improvement Modeling Analysis,* revised August 19, 2010, which was approved by EPA and is included in the Supporting and Related Materials section of the docket. The Colorado protocol follows recommendations for long-range transport described in appendix W to 40 CFR part 51, *Guideline on Air Quality Models,* and in EPA's *Interagency Workgroup on Air Quality Modeling (IWAQM) Phase 2 Summary Report and Recommendations for Modeling Long Range Transport Impacts,* as recommended by the BART Guidelines. (40 CFR part 51, appendix Y, section III.D.5).

b. Summary of BART Determinations and Federally Enforceable Limits

In lieu of individual BART determinations, the State submitted a BART alternative as allowed for by 40 CFR 51.308(e)(2) for three of the subject-to-BART sources: Cherokee Station Unit 4, Pawnee Station Unit 1, and Valmont Station Unit 5. We provide a summary of the BART alternative in section IV.C.3.b.vii of this notice. We are proposing to approve the BART alternative. For the rest of the subject-to-BART sources, the State provided analyses that took into consideration the five factors as required by section 169A(g)(2) of the CAA. The State's five factor analyses, as well as additional technical information and materials, are included in Appendix C of the SIP. Chapter 6 of the SIP provides a summary of the five factor analyses. EPA is proposing to approve the BART determinations submitted by the State for Cemex Lyons Kiln and Dryer, CENC Unit 4 and Unit 5, Comanche Unit 1 and Unit 2, Craig Unit 2, Hayden Unit 1 and Unit 2, and Martin Drake Unit 5, Unit 6, and Unit 7. A summary of the BART determination for each source is provided below.

i. Cemex Lyons Dryer and Kiln

Background

The Cemex facility manufactures Portland cement and is located in Lyons, Colorado, approximately 20 miles from Rocky Mountain National Park. There are two BART-eligible units at the facility: The dryer and the kiln. The Lyons plant was originally constructed with a long dry kiln. In 1980, the kiln was cut to one-half its original length, and a flash vessel was added with a single-stage preheater. The permitted kiln feed rate is 120 tons per hour of raw material (kiln feed), and on average yields approximately 62 tons of clinker per hour. The kiln is the main source of SO_2 and NO_X emissions. The raw material dryer emits minor amounts of SO_2 and NO_X. The State's BART determination can be found in Chapter 6.4.3.1 and Appendix C of the SIP.

Baseline Emissions

The State has emissions data for the dryer from 1999, 2003, 2008, and 2009. The 1999 emissions are based on emission factors, whereas the 2003, 2008 and 2009 emissions are based on a stack test. The State has determined that the 2008 emissions best represent baseline emissions for the dryer since the State considers stack test data more reliable than emission factors. Furthermore, the 2008 clinker production is representative of typical operations because it falls within the normal range of the historical average. The 2008 baseline emissions for the dryer are: 10.41 tpy for NO_X; 0.89 tpy for SO_2; and 5.12 tpy for PM.

The State has determined that the 2002 emissions best represent baseline emissions for the kiln because they correspond to the high range for SO_2 emissions (which can vary significantly due to pyrites in the limestone) and the normal historical range for NO_X emissions and clinker production. The 2002 baseline emissions for the kiln are: 1,747 tpy for NO_X; 95 tpy for SO_2; and 8.5 tpy for PM.

SO_2 and NO_X BART Determination for the Dryer

CALPUFF modeling provided by the source, using a maximum SO_2 emission rate of 123.4 lbs/hour for both the dryer and kiln combined, shows a 98th percentile visibility impact of 0.78 delta dv at the most impacted Class I area, Rocky Mountain National Park. The State determined the modeling was performed correctly and EPA agrees with the State's assessment. The modeled 98th percentile visibility impact from the kiln is 0.76 dv. Thus, the visibility impact of the dryer alone

[14] ''*Revised BART Analysis for Unit 1 & 2 Gerald Gentleman Station Sutherland, Nebraska: Nebraska Public Power District.''* Prepared by: HDF 701 Xenia Avenue South, Suite 600 Minneapolis, MN 55416 With control technology costs provided by: Sargent & Lundy.

is the resultant difference of 0.02 dv. Because of the extremely low visibility impact and emissions from the dryer, the State has determined that no meaningful visibility improvements would result from any conceivable controls on the dryer. The State has determined that SO_2 and NO_X BART for the Cemex dryer are the following existing emission limits: 36.7 tpy for SO_2 and 13.9 tpy for NO_X on a 12-month rolling average.

EPA is proposing to approve the State's SO_2 and NO_X BART determinations for the Cemex Lyons dryer. EPA agrees with the State that no significant visibility improvements would result from the application of controls on the dryer.

SO_2 BART Determination for the Kiln

The kiln has no current SO_2 controls, but approximately 80% of the SO_2 emissions are captured as part of the inherent control of the kiln process. The State determined that lime addition to kiln feed, fuel substitution (coal with tire-derived fuel), dry sorbent injection (DSI), and wet lime scrubbing (WLS) were technically feasible for reducing SO_2 emissions from the Cemex kiln. The State determined raw materials substitution was technically infeasible.

The State did not identify any energy or non-air quality environmental impacts that would preclude the selection of any of the controls evaluated, and there are no remaining-useful-life issues for this source. A summary of the State's SO_2 BART analysis and the visibility impacts derived from modeling conducted by the source is provided in Table 3 below.

TABLE 3—SUMMARY OF CEMEX-LYONS KILN SO_2 BART ANALYSIS

Control technology	Control efficiency (%)	Annual controlled hourly SO_2 emissions (lbs/hr)	Emission reduction (tpy)	Annualized cost	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
Lime Addition to Kiln Feed	25	19	23.8	$3,640,178	$153,271	0.033
Fuel Substitution	40	15.2	38	172,179	4,531	0.034
DSI	50	12.7	47.5	.....	.....	0.036
WLS	90	2.5	85.5	2,529,018	29,579	0.040

Based upon its consideration and weighing of the five factors, the State has determined that no additional SO_2 emissions control on the kiln is reasonable for BART. The State determined that the added expense of any of the potential SO_2 controls was not reasonable for the small visibility improvement of 0.04 dvs or less. Despite not having cost information on DSI, the State determined that the minimal visibility improvement of 0.036 dv does not justify further consideration of this control technology. The State has determined that emissions from the 2002 baseline period represent BART for SO_2 emissions for the kiln. The State determined that the SO_2 BART emission limits for the kiln are 25.3 lbs/hour and 95.0 tpy of SO_2 (12-month rolling average).

We are proposing to approve the State's SO_2 BART determination for the Cemex Lyons kiln. The State's weighing of the factors was reasonable and resulted in a reasonable determination for SO_2 BART.

NO_X BART Determination for the Kiln

The kiln is currently uncontrolled for NO_X emissions. The State determined that water injection, firing coal supplemented with tire-derived fuel (TDF), indirect firing with low NO_X burners (LNBs), SNCR, and the combination of SNCR and LNBs were technically feasible and appropriate for reducing NO_X emissions from the Cemex kiln. The State determined that SCR is not commercially available for Portland cement kilns. EPA does not agree with the State's assertion that SCR is not commercially available for Portland cement kilns.

Although we disagree with the State's conclusion on the commercial availability of SCR for cement kilns, we accept the State's decision, for purposes of RH, not to analyze this control technology further. We note that EPA has acknowledged, in the context of establishing the New Source Performance Standards (NSPS) for Portland Cement Plants, substantial uncertainty regarding the cost effectiveness associated with the use of SCR at such plants. See 75 FR 54995. We expect the State to reevaluate this technology in subsequent RP planning periods.

The State did not identify any energy or non-air quality environmental impacts that would preclude the selection of any of the controls evaluated, and there are no remaining-useful-life issues for this facility. A summary of the State's NO_X BART analysis and the visibility impacts derived from modeling conducted by the source is provided in Table 4 below.

TABLE 4—SUMMARY OF CEMEX-LYONS KILN NO_X BART ANALYSIS

Control technology	Control efficiency (%)	Annual controlled hourly NO_X emissions (lbs/hr)	Emission reduction (tpy)	Annualized cost	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile Impact)
Water Injection	7	431.8	122.3	$43,598	$356	0.22
Firing TDF	10	417.8	174.7	172,179	986	0.23
Indirect Firing with LNBs	20	371.4	349.4	710,179	2,034	0.28
SNCR	45	255.3	786.2	1,636,636	2,082	0.39
SNCR	48.5	239.4	846.1	1,636,636	1,934	0.41
SNCR with LNBs	55	208.9	960.9	1,686,395	1,755	0.44

As the table shows, SNCR with LNB could potentially achieve the greatest emission reductions for the control technologies evaluated. The Cemex-Lyons facility is a unique kiln system most accurately described as a modified long dry kiln. The characteristics of a modified long dry kiln system are not similar to either a long wet kiln or a multi-stage preheater/precalciner kiln. The temperature profile in a long dry kiln system (>1500°F) is significantly higher at the exit than a more typical preheater/precalciner kiln (650 °F). This limits the location and residence time available for an effective NO_X control system. Because of this unique design, the State determined that SNCR and the combination of SNCR with LNBs have an uncertain level of control. Because the design of the Cemex kiln is unlike that for other kilns where SNCR has been successfully applied, it is uncertain whether SNCR can achieve emission reductions of 48.5%. The incremental reduction in visibility associated with SNCR in combination with LNBs would be 0.05 dv over just SNCR alone. Based on the uncertainty concerning the control efficiency of SNCR alone and SNCR with LNBs, and based on the small incremental visibility improvement that would result from SNCR in combination with LNBs over just SNCR, the State determined that BART for NO_X equates to an emission limit consistent with SNCR at 45% control. The State determined that the NO_X BART emission limits for the Cemex kiln are 255.3 pounds per hour (30-day rolling average) and 901.0 tons per year (12-month rolling average). The State assumes the emission limits can be met with the installation and operation of SNCR.

We agree with the State's conclusion, and we are proposing to approve the State's NO_X BART determination for the Cemex-Lyons kiln.

PM BART Determination

PM emissions from the kiln and dryer are currently controlled by fabric filter baghouses and wet dust suppression techniques. Current PM emission limits are in compliance with the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Categories; Portland Cement Manufacturing Industry, 40 CFR part 63, subpart LLL. The existing NESHAP regulatory emission limits for the kiln are 0.275 lb/ton of dry feed and 20% opacity. For the dryer, the emission limit is 22.8 tpy and 10% opacity. For sources already regulated by a NESHAP standard, EPA stated the following in the BART guidelines: ''We believe that, in many cases, it will be unlikely that States will identify emission controls more stringent than the MACT standards without identifying control options that would cost many thousands of dollars per ton. Unless there are new technologies subsequent to the MACT standards which would lead to cost effective increases in the level of control, you may rely on the MACT standards for purposes of BART.'' (70 FR 39163) (MACT means Maximum Achievable Control Technology).

The State determined that no new PM control methodologies could be identified that would improve upon the PM controls required in the NESHAP. The State determined that the current emission limit and control technology represent the most stringent level of control and are BART for PM for the Cemex-Lyons kiln and dryer. Per the BART Guidelines, if the BART source has the most stringent control technology and limit in place, a full five-factor analysis is not required (70 FR 39165). The State determined that PM BART emission limits for the kiln are 0.275 lb/ton of dry feed and 20% opacity and the emission limits for the dryer are 22.8 tpy (12-month rolling average) and 10% opacity. The State assumes the limits can be achieved with the operation of the current fabric filter baghouses.

We are proposing to approve the State's PM BART determinations for the Cemex-Lyons kiln and dryer. We agree with the State that the existing controls and emission limits represent the most stringent level of PM control for this type of facility.

ii. CENC Boilers 4 and 5

Background

This CENC facility is located adjacent, and supplies steam and electrical power, to the Coors Brewery in Golden, Colorado. The facility consists of five boilers and the associated equipment for coal and ash handling. Boilers 4 and 5 are the only units that are subject to BART. Boiler 4 mainly fires coal, but can also fire natural gas. Fuel oil may be used as a backup fuel, but has not been used in recent years. Boiler 5 fires coal, but uses oil as a backup fuel. Either boiler may also fire ethanol or sludge from the Coors Brewery. Boiler 4 is rated at 360 MMBtu/hr and Boiler 5 at 650 MMBtu/hr. Both boilers are pulverized-coal dry-bottom tangentially-fired boilers. The BART determination for CENC Boilers 4 and 5 can be found in Chapter 6.4.3.2 and Appendix C of the SIP.

SO_2 BART Determination

Boilers 4 and 5 are currently uncontrolled for SO_2. The State determined that DSI and SO_2 emission management were technically feasible for reducing SO_2 emissions from Boilers 4 and 5. The State determined that dry FGD controls were not technically feasible due to space constraints at the facility. Emissions management for SO_2 encompasses a variety of options to reduce SO_2 emissions, including dispatching natural gas-fired capacity, reducing total system load, and/or reducing coal firing rate to maintain a new peak SO_2 limit. The State also evaluated tightening the emission limits for Boiler 4 and 5 based on current operations.

The State did not identify any energy or non-air quality environmental impacts that would preclude the selection of any of the controls evaluated, nor are there any remaining-useful-life issues for the source. A summary of the State's SO_2 BART analysis and the visibility impacts is provided in Tables 5 and 6 below. The State did not model the visibility improvement of SO_2 emissions management because the emission reduction from the control technology is negligible. The emission rate for each control option in the tables is reflective of the 30-day rolling average contained in the State's BART analysis. Baseline SO_2 emissions are 781 tpy for Boiler 4 and 1,406 tpy for Boiler 5 based on the average of 2006–2008 actual emissions.

TABLE 5—SUMMARY OF CENC BOILER 4 SO_2 BART ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu)	Emission reduction (tpy)	Annualized cost	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
SO_2 Emissions Management	0.13	.74	1	$44,299	$43,600	NA

TABLE 5—SUMMARY OF CENC BOILER 4 SO_2 BART ANALYSIS—Continued

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu)	Emission reduction (tpy)	Annualized cost	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
DSI	60	.30	468	1,766,000	3,774	0.08

TABLE 6—SUMMARY OF CENC BOILER 5 SO_2 BART ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu)	Emission reduction (tpy)	Annualized cost	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
SO_2 Emissions Management	0.063	.82	0.8	$65,882	$78,095	NA
DSI	60	.33	844	2,094,000	2,482	0.13

Based on its consideration of the five factors, the State determined that SO_2 emissions management and DSI are not reasonable for BART. The State further evaluated emissions limit tightening based on current operations, which is a no-cost control option. The State determined that it would be appropriate to evaluate a lower emission limit based on percent sulfur and heat content. Based on the boiler sulfur to SO_2 conversions, the State has determined that the SO_2 BART emission limit for CENC Boiler 4 is 1.0 lb/MMBtu (30-day rolling average) and for Boiler 5 is 1.0 lb/MMBtu (30-day rolling average). The details of the State's calculation can be found in the State's BART analysis.

We agree with the State's conclusions, and we are proposing to approve its SO_2 BART determinations for CENC Boiler 4 and Boiler 5.

NO_X BART Determination

Boilers 4 and 5 are currently uncontrolled for NO_X. The State determined that LNBs, LNBs plus separated overfire air (SOFA), SNCR, SNCR plus LNB plus SOFA, and SCR were technically feasible for reducing NO_X emissions at CENC Boilers 4 and 5. The State determined rich reagent injection (RRI), ECO System, and coal reburn with SNCR were technically infeasible.

The State did not identify any energy or non-air quality environmental impacts that would preclude the selection of any of the controls evaluated, nor are there any remaining-useful-life issues for this source. A summary of the State's NO_X BART analysis and the visibility impacts is provided in Tables 7 and 8 below. The emission rate for each control option in the tables is reflective of the 30-day rolling average contained in the State's BART analysis. Baseline NO_X emissions are 600 tpy for Boiler 4 and 691 tpy for Boiler 5, based on the average of 2006–2008 actual emissions.

TABLE 7—SUMMARY OF CENC BOILER 4 NO_X BART ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu) (30-day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
LNBs	[15] 7	.52	59.9	$193,433	$3,227	0.05
SNCR	30	.40	179.8	694,046	3,860	0.07
LNBs + SOFA	18.5	.37	209.8	678,305	3,234	0.08
LNB + SOFA + SNCR	51	.22	368	1,372,351	3,729	0.12
SCR	79.6	.08	515.4	4,201,038	8,150	0.18

TABLE 8—SUMMARY OF CENC BOILER 5 NO_X BART ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu) (30-day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
LNBs	7	.37	48.4	$249,858	$5,166	0.17
SNCR	30	.32	127.3	815,829	6,383	0.21
LNBs + SOFA	18.5	.28	207.3	923,996	4,458	0.21
LNBs + SOFA + SNCR	51	.19	353.7	1,739,825	4,918	0.26
SCR	79.6	.08	550.0	6,469,610	11,764	0.31

Based on its consideration of the five factors, the State determined BART is LNBs + SOFA for Boiler 4 and LNBs + SOFA + SNCR for Boiler 5. Although SCR achieves better emissions reductions, the State determined that SCR is not reasonable based on the high cost effectiveness values and the low visibility improvement afforded by this control. The State has determined that the NO_X BART emission limit for CENC Boiler 4 is 0.37 lb/MMBtu (30-day rolling average) and for Boiler 5 is 0.19 lb/MMBtu (30-day rolling average). The State assumes the BART emission limits can be achieved by the installation and operation of LNBs with SOFA on Boiler 4 and LNBs + SOFA + SNCR on Boiler 5.

Per the BART Guidelines, states may consider allowing sources to average emissions across any set of BART eligible emissions units within a fenceline, so long as the emission reductions from each pollutant being controlled for BART would be equal to those reductions that would be obtained by simply controlling each of the BART-eligible sources (70 FR 39172). Pursuant to this, the State also established a combined NO_X BART limit for CENC Boiler 4 and Boiler 5 of 0.26 lb/MMBtu on a 30-day rolling average.

We agree with the State's conclusions, and we are proposing to approve the State's NO_X BART determinations for CENC Boiler 4 and Boiler 5.

PM BART Determination

CENC Boilers 4 and 5 are each equipped with fabric filter baghouses to control PM emissions with a current emission limit of 0.07 lb/MMBtu. Fabric filter baghouses are the most stringent control technology for controlling PM emissions, and stack tests show that the fabric filter baghouses are achieving a 98% reduction in PM. The State determined that PM BART for Boiler 4 and Boiler 5 is an emission limit of 0.07 lb/MMBtu. The State assumes the BART emission limit can be met with the operation of the current fabric filter baghouses.

While we do not agree with all of the State's assumptions and conclusions in arriving at a PM BART limit of 0.07 lb/MMBtu, we are proposing to approve the State's PM BART determinations for CENC Boiler 4 and Boiler 5. Based on our review/analysis, CENC is capable of achieving a lower emission limit than 0.07 lb/MMBtu with existing equipment. However, we anticipate that the visibility improvement that would result from lowering the limit from 0.07 lb/MMBtu to 0.03 lb/MMBtu would be insignificant. Under these circumstances, we propose to find that the State's BART determination was reasonable.

iii. PSCO Comanche Station Units 1 and 2

Background

Comanche Station is located in Pueblo, Colorado. It consists of three coal-fired EGUs, Units 1, 2, and 3. Unit 1 is rated at 325 megawatts (MW) and Unit 2 is rated at 335 MW. Unit 1 and Unit 2 are the only subject-to-BART units at Comanche Station. The boilers burn sub-bituminous coal as fuel and use natural gas for startup, shutdown, and flame stabilization. Both units are dry-bottom pulverized coal-fired boilers. Unit 1 is tangentially fired and Unit 2 is wall-fired.

In August of 2004, PSCO proposed to construct and operate Unit 3 at Comanche Station. As part of the project, PSCO proposed to install NO_X and SO_2 control devices on Unit 1 and Unit 2 and take new emission limits on those units. In November 2008, PSCO installed LNBs with OFA and a lime spray dryer (LSD) on Unit 1, and in November 2007, PSCO installed LNBs with OFA and a LSD on Unit 2. Operation of the LSDs did not commence until June 3, 2009 for Unit 1 and January 10, 2009 for Unit 2. The State's BART determination for Comanche Station Units 1 and 2 can be found in Chapter 6.4.3.3 and Appendix C of the SIP.

SO_2 BART Determination

The State determined that the LSD on Unit 1 is achieving 76.1% control and the LSD on Unit 2 is achieving 81.9% control. Baseline SO_2 emissions are 1,557 tpy for Unit 1 and 1,244 tpy for Unit 2 based on 2009 actual emissions. The current emission limit for Units 1 and 2 is 0.12 lb/MMBtu each on a 30-day rolling average and a combined annual average of 0.10 lb/MMBtu. Per the BART Guidelines, for EGUs with preexisting post-combustion SO_2 controls achieving removal efficiencies of at least 50 percent, states should consider cost effective scrubber upgrades designed to improve the system's overall SO_2 removal efficiency (70 FR 39171). Under the BART Guidelines, a state is not required to evaluate the replacement of the current SO_2 controls if their removal efficiency is over 50%. The State's BART analysis evaluated numerous LSD upgrades including: (1) Use of performance additives; (2) use of more reactive sorbent; (3) increasing the pulverization level of sorbent; (4) engineering redesign of atomizer or slurry injection system; and (5) additional equipment and maintenance. The State analyzed the potential upgrades and determined all upgrades were either technically infeasible or would not achieve a decrease in current SO_2 emissions.

The State also assessed emissions limit tightening based on current operations. The State reviewed available SO_2 emissions data from EPA's Clean Air Markets Division (CAMD) for 2009 and for part of 2010 (January–October 2010). Since the LSDs only recently commenced full operation, there was limited data available for the State to determine post-control achievable emissions. In its submittal to the State, PSCO provided additional information pertaining to emissions limit tightening. PSCO stated that during low-load operations the inlet temperature at the baghouse approaches the minimum acceptable level, lowering the overall SO_2 control efficiency during low-load operations. PSCO indicated that, due to the increased use of wind resources, the boilers will be required to cycle more frequently to accommodate intermittent wind resources, and, therefore, the units will run at low loads more frequently. As a result, the SO_2 reduction levels will be lower during those times.

Based on this information, the State determined that the limited emissions data from 2009 and 2010 may not accurately represent future plant emissions. In addition, since the LSDs only came on line recently, the State recognized that PSCO has limited operating experience with these units. Although PSCO has other units that are equipped with LSDs, Comanche Station Units 1 and 2 are the first such units in PSCO's system that are firing Powder River Basin coal. After startup of the LSDs in 2009, both units have had a number of days indicating zero emissions, presumably due to a unit shutdown. In many cases, emissions data shows that for one or more days following these events, the daily SO_2 emission rate is frequently well above 0.12 lb/MMBtu. In looking at the data, the State also found that both units have historically lower inlet temperatures to the scrubbers in the winter months, resulting in increased SO_2 emissions.

Based on the information discussed above, the State concluded that a tighter 30-day rolling average and annual average SO_2 emission limit is not feasible at this time for either unit.

[15] EPA's AP–42 emission factor tables estimate that LNBs can control 35–55%, and LNB with OFA can control 40–60%, of NO_X emissions. However, due to the size and configuration (e.g. furnace dimensions) of the CENC boilers, the State has determined that the estimated control efficiency for LNBs and LNBs with OFA used in the analysis are reasonable.

Based on its analysis, the State determined that the SO_2 BART emission limit for Comanche Station Unit 1 is 0.12 lb/MMBtu (30-day rolling average) and for Unit 2 is 0.12 lb/MMBtu (30-day rolling average). The State also established a SO_2 BART emission limit of 0.10 lb/MMBtu, combined annual average for both units.

We agree with the State's conclusions and are proposing to approve its SO_2 BART determinations for Comanche Station Unit 1 and Unit 2.

NO_X BART Determination

Comanche Station Units 1 and 2 currently have a NO_X permit limit of 0.20 lb/MMBtu on a 30-day rolling average for each unit and a combined annual average limit of 0.15 lb/MMBtu. The State determined that SCR and SNCR were technically feasible at Unit 1 and SCR was technically feasible for Unit 2. PSCO conducted testing in the fall of 2008 on Unit 2 using a temporary SNCR system. PSCO performed the testing following the installation of LNBs and OFA to determine if additional reductions could be achieved. PSCO primarily conducted testing at full load over a seven-day period using a single-level urea based SNCR system. The SNCR system is sensitive to temperature and average exhaust temperature in the injection area for Unit 2 was nearly 2,200 °F, which exceeds the optimal temperature for the technology. During the test periods, NO_X reductions were less than 10%, and in some cases during testing, an actual increase in NO_X emissions was observed by PSCO. Based on the results of PSCO's test of SNCR on Unit 2, the State did not evaluate SNCR further as a control option for Unit 2. The State also determined that ECO system and RRI were technically infeasible for both units. The State did not evaluate rotating opposed fire air (ROFA) and reburning because they do not achieve better emission reductions than the current controls.

The State did not identify any energy or non-air quality environmental impacts that would preclude the selection of any of the controls evaluated, nor are there any remaining-useful-life issues for this source. Baseline NO_X emissions from the 2009 calendar year are 1,511 tpy for Unit 1 and 2,349 tpy for Unit 2. A summary of the State's NO_X BART analysis and the visibility impacts is provided in Tables 9 and 10 below. The emission rate for each control option in the tables is reflective of the 30-day rolling average contained in the State's BART analysis.

TABLE 9—SUMMARY OF COMANCHE STATION UNIT 1 NO_X BART ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu) (30-day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
SNCR	29.5	0.10	446	$1,624,100	$3,644	0.11
SCR	51	0.07	770	12,265,014	15,290	0.14

TABLE 10—SUMMARY OF COMANCHE STATION UNIT 2 NO_X BART ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu) (30-day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
SCR	63	0.07	1480	$14,650,885	$9,900	0.17

Based on its consideration of the five factors, the State has determined that the NO_X BART emission limit for Comanche Station Unit 1 is 0.20 lb/MMBtu (30-day rolling average) and for Unit 2 is 0.20 lb/MMBtu (30-day rolling average). The State also established a NO_X BART emission limit of 0.15 lb/MMBtu, combined annual average for both units.

The State assumes that the BART emission limits can be achieved through the operation of existing LNBs. Although the other alternatives achieve better emissions reductions, the State determined that the added expense of achieving lower limits through different controls was not reasonable based on the high cost effectiveness coupled with the low visibility improvement (under 0.2 dv) afforded.

We agree with the State's conclusions, and we are proposing to approve the State's NO_X BART determinations for Comanche Station Unit 1 and Unit 2.

PM BART Determination

Comanche Station Units 1 and 2 are each equipped with fabric filter baghouses to control PM emissions with an emission limit of 0.03 lb/MMBtu. Stack tests show that the fabric filter baghouses are achieving a 99% reduction in PM. Fabric filter baghouses are the most stringent control technology for controlling PM emissions. The State also evaluated what would constitute the most stringent level of control for PM by looking at recent Best Available Control Technology (BACT) determinations. Based on this evaluation, the State determined that an emission limit of 0.03 lb/MMBtu represents the most stringent level of control for this type of source. Consistent with the BART Guidelines, the State did not provide a full five-factor analysis because the State determined BART to be the most stringent control technology and limit. The State determined that the PM BART limit for Comanche Station Units 1 and 2 is 0.03 lb/MMBtu (30-day rolling average). The State assumes the BART limit can be met with the operation of the existing fabric filter baghouses.

We agree with the State's conclusions, and we are proposing to approve its PM BART determinations for Comanche Station Unit 1 and Unit 2.

iv. Tri-State Craig Units 1 and 2

Background

The Tri-State Generation & Transmission Association, Inc. (Tri-State) Craig Station is located in Moffat County approximately 2.5 miles southwest of the town of Craig,

Colorado. This facility is a coal-fired power plant with a total net electric generating capacity of 1264 MW, consisting of three units. Only Units 1 and 2 are BART-eligible. Units 1 and 2 are dry-bottom pulverized coal-fired boilers and are each rated at a net capacity of 428 MW. The State's BART determination for Craig Units 1 and 2 can be found in Chapter 6.4.3.4 and Appendix C of the SIP.

SO_2 BART Determination

Craig Unit 1 and Unit 2 are currently controlled with wet FGD. The units have a current SO_2 emission limit of 0.16 lb/MMBtu on a 30-day rolling average and a requirement to achieve a 90% reduction of SO_2 (90-day rolling average). Per the BART Guidelines, for EGUs with preexisting post-combustion SO_2 controls achieving removal efficiencies of at least 50 percent, states should consider cost effective scrubber upgrades designed to improve the system's overall SO_2 removal efficiency (70 FR 39171). Under the BART Guidelines, a state is not required to evaluate the replacement of the current SO_2 controls if their removal efficiency is over 50%.

The State evaluated the following wet FGD upgrades: (1) Elimination of bypass reheat; (2) installation of liquid distribution rings; (3) installation of perforated trays; (4) use of organic acid additives; (5) improve or upgrade scrubber auxiliary equipment; and (6) redesign spray header or nozzle configuration. Tri-State performed numerous upgrades at Units 1 and 2 during 2003–2004. The State determined that Tri-State had installed all of the above upgrades with the exception of liquid distribution rings and use of organic additives. The State determined that the installation of perforated trays achieved the same objective as these upgrades.

The State evaluated emission limit tightening based on current operations. The State analyzed the baseline period (2006–2008) emission data from EPA's CAMD to determine the maximum and average 30-day rolling emission rates. The emissions data shows that the maximum 30-day rolling average was 0.08 lb/MMBtu for Unit 1 and 0.09 lb/MMBtu for Unit 2. The average 30-day rolling emission rate was 0.05 lb/MMBtu for Unit 1 and 0.08 for Unit 2. The daily maximum over the three-year period was 0.17 lb/MMBtu for Unit 1 and 0.16 lb/MMBtu for Unit 2. Table 11 shows the visibility improvement modeled by the State for possible lower SO_2 emission limits.

TABLE 11—CRAIG UNIT 1 AND UNIT 2 SO_2 VISIBILITY IMPROVEMENT

SO_2 Control	Emission rate (lb/MMBtu) (30-day rolling average)	Craig unit 1—visibility improvement (delta dv for the maximum 98th percentile impact)	Craig unit 2—visibility improvement (delta dv for the maximum 98th percentile impact)
Wet FGD	0.11	0.03	0.03
Wet FGD	0.07	0.05	0.05

The State determined that an emission limit of 0.11 lb/MMBtu would be achievable without additional capital investment. The State determined that an emission limit lower than 0.11 lb/MMBtu would likely require additional capital expenditure and determined it was not reasonable for the incremental visibility improvement of 0.02. The State has determined that the SO_2 BART emission limit for Craig Unit 1 is 0.11 lb/MMBtu (30-day rolling average) and for Unit 2 is 0.11 lb/MMBtu (30-day rolling average). The State assumes that the BART emission limits can be achieved through the operation of the existing wet FGD.

We agree with the State's conclusions, and we are proposing to approve its SO_2 BART determinations for Craig Unit 1 and Unit 2.

NO_X BART Determination

Craig Units 1 and 2 are currently controlled with ultra low NO_X burners (ULNBs) plus OFA, achieving emission reductions of about 54 percent each. The State determined that combustion control refinements, neural network systems, SNCR, and SCR were technically feasible.[16] The State determined that ECO, RRI, ROFA, and coal reburn plus SNCR were not technically feasible. The State did not identify any energy or non-air quality environmental impacts that would preclude the selection of any of the controls evaluated, nor are there any remaining-useful-life issues for this source. Baseline NO_X emissions are 5,190 tpy for Unit 1 and 5,372 tpy for Unit 2 based on the average of 2006–2008 actual emissions. A summary of the State's NO_X BART analysis and the visibility impacts is provided in Tables 12 and 13 below. The emission rate for each control option in the tables is reflective of the 30-day rolling average contained in the State's BART analysis. Due to the very small percent control achieved with combustion control refinements and neural network systems, the State did not perform visibility modeling for these two control options. Thus, Tables 12 and 13 do not show a value for visibility improvement for these options.

[16] Although not reflected in the SIP, the State's five-factor analysis in Appendix C of the SIP contains information on combustion control refinements and neural network systems.

TABLE 12—SUMMARY OF CRAIG UNIT 1 NO_X BART ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu) (30-day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
Combustion Control Refinements	2	0.31	104	$122,000	$1,175	.....
Neural Network System	5	0.30	260	280,000	1,079	.....
SNCR	15	0.27	779	3,797,000	4,877	0.31
SCR	74.9	0.08	3,893	25,036,709	6,432	1.01

TABLE 13—SUMMARY OF CRAIG UNIT 2 NO_X BART ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu) (30-day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
Combustion Control Refinements	2	0.31	104	$122,000	$1,136	.....
Neural Network System	5	0.30	260	280,000	1,043	.....
SNCR	15	0.27	779	3,797,000	4,712	0.31
SCR	74	0.07	3,893	25,036,709	6,299	1.01

The State determined that SNCR was reasonable for BART for both Unit 1 and Unit 2 based on the cost effectiveness and visibility improvement associated with this level of control. The State determined SCR was not reasonable because of the high cost effectiveness value. Based upon its consideration of the five factors, the State determined that the NO_X BART emission limit for Craig Unit 1 is 0.27 lb/MMBtu (30-day rolling average) and for Unit 2 is 0.27 lb/MMBtu (30-day rolling average). The State assumed that the BART emission limits can be achieved through the operation of SNCR. We agree with the State's BART determination that an emission limit of 0.27 lb/MMBtu is NO_X BART for Craig Unit 1 and Unit 2. The State arrived at this limit based on a reasonable consideration of the five factors.

Although the State determined that 0.27 lb/MMBtu was NO_X BART for Craig Unit 1 and Unit 2, the State adopted a more stringent emission limit for Craig Unit 2 in its SIP and a slightly less stringent limit for Unit 1. Tri-State and the State agreed to a NO_X emissions control plan for Craig Unit 1 and Unit 2 that is more stringent overall. It consists of emission limits associated with the operation of SNCR for Unit 1 and the operation of SCR for Unit 2. These NO_X emission limits are 0.28 lb/MMBtu (30-day rolling average) for Craig Unit 1 and 0.08 lb/MMBtu (30-day rolling average) for Craig Unit 2. The State adopted these emission limits in its SIP, and these are the emission limits Tri-State must meet for purposes of the RH program. We are proposing to approve the State's NO_X emission limits for Craig Unit 1 and for Craig Unit 2 as satisfying the requirements of 40 CFR 51.308(e).

PM BART Determination

Craig Units 1 and 2 are each equipped with fabric filter baghouses to control PM emissions with an emission limit of 0.03 lb/MMBtu. Stack tests show that the fabric filter baghouses are achieving a 99% reduction in PM. Fabric filter baghouses are the most stringent control technology for controlling PM emissions. The State also evaluated what would constitute the most stringent level of control for PM by looking at recent BACT determinations. Based on this evaluation, the State determined that an emission limit of 0.03 lb/MMBtu represents the most stringent level of control for this type of source. Consistent with the BART Guidelines, the State did not provide a full five-factor analysis because the State determined BART to be the most stringent control technology and limit. The State determined that the PM BART emission limit is 0.03 lb/MMBtu (30-day rolling average) at Craig Unit 1 and Craig Unit 2. The State assumes the BART emission limits can be met through the operation of the current fabric filter baghouses.

We agree with the State's conclusions, and we are proposing to approve its PM BART determinations for Craig Unit 1 and Unit 2.

v. PSCO Hayden Station Units 1 and 2

Background

The Hayden facility is located four miles east of Hayden, Colorado in Routt County. This facility consists of two steam driven turbine/generator units, Units 1 and 2, and the associated equipment needed for generating electricity. Unit 1 is a pulverized-coal front-fired dry-bottom boiler, firing coal, with natural gas and No. 2 fuel oil used for startup, shutdown, and/or flame stabilization. Unit 2 is a pulverized-coal tangentially-fired dry-bottom boiler, firing coal, with No. 2 fuel oil used for startup, shutdown, and/or flame stabilization. Units 1 and 2 are the only subject-to-BART units at the facility. The State's BART determination for Hayden Units 1 and 2 can be found in Chapter 6.4.3.5 and Appendix C of the SIP.

SO_2 BART Determination

PSCO Hayden Units 1 and 2 are currently controlled with LSDs. Both units have a current SO_2 emission limit of 0.16 lb/MMBtu (30-day rolling average) and a requirement to achieve an 82% reduction of SO_2 (30-day rolling average). As mentioned earlier, if a BART source has current SO_2 controls achieving at least 50% control, then the state needs to evaluate upgrades to the existing control technology but does not need to consider the replacement of that technology. The State's BART analysis evaluated numerous LSD upgrades including: (1) Use of performance additives; (2) use of more reactive sorbent; (3) increasing the pulverization

level of sorbent; (4) engineering redesign of atomizer or slurry injection system (including an additional scrubber vessel); and (5) additional equipment and maintenance. The State determined that the application of the first three upgrades in the list above would not result in lower SO_2 emissions. The State determined that engineering redesign using an additional scrubber vessel and additional equipment and maintenance were technically feasible and would potentially achieve SO_2 emissions reductions.

The State did not identify any energy or non-air quality environmental impacts that would preclude the selection of any of the controls evaluated, nor are there any remaining-useful-life issues for this source. Baseline SO_2 emissions are 1,172 tpy for Unit 1 and 1,469 tpy for Unit 2 based on the average of 2006–2008 actual emissions. A summary of the State's SO_2 BART analysis and the visibility impacts is provided in Tables 14 and 15 below. The emission rate for each control option in the tables is reflective of the 30-day rolling average contained in the State's BART analysis.

TABLE 14—SUMMARY OF HAYDEN UNIT 1 SO_2 BART ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu) (30-day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
Additional Equipment and Maintenance ..	5.2	0.13	61	$141,150	$2,317	.10
Additional Scrubber Vessel	41.7	0.08	488	4,142,538	8,490	0.14

TABLE 15—SUMMARY OF HAYDEN UNIT 2 SO_2 BART ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu) (30-day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
Additional Equipment and Maintenance ..	2.7	0.13	39	$141,150	$3,626	0.21
Additional Scrubber Vessel	40.1	0.08	589	4,808,896	8,164	0.26

The State determined that the cost of an additional scrubber vessel was not reasonable for BART controls. The State determined that additional equipment and maintenance was reasonable for SO_2 BART controls and that a more stringent 30-day rolling SO_2 limit represents an appropriate level of emissions control for BART for Hayden Units 1 and 2. Based on its consideration of the five factors, the State has determined that the SO_2 BART emission limit for Hayden Unit 1 is 0.13 lb/MMBtu (30-day rolling average) and for Unit 2 is 0.13 lb/MMBtu (30-day rolling average). The State assumes the BART emission limit can be met with the operation of the existing LSD.

We agree with the State's conclusions, and we are proposing to approve its SO_2 BART determinations for Hayden Unit 1 and Unit 2.

NO_X BART Determination

Hayden Units 1 and 2 are currently controlled with LNBs plus OFA, achieving emission reductions of 54 percent and 33 percent, respectively. The State determined that upgrades to the existing LNBs, SNCR, and SCR were technically feasible. The State determined that ECO, RRI, ROFA, and coal reburn plus SNCR were not technically feasible. The State did not identify any energy or non-air quality environmental impacts that would preclude the selection of any of the controls evaluated, nor are there any remaining-useful-life issues for this source. Baseline NO_X emissions are 3,750 tpy for Unit 1 and 3,743 tpy for Unit 2 based on the average of 2006–2008 actual emissions. A summary of the State's NO_X BART analysis and the visibility impacts is provided in Tables 16 and 17 below. The emission rate for each control option in the tables is reflective of the 30-day rolling average contained in the State's BART analysis.

TABLE 16—SUMMARY OF HAYDEN UNIT 1 NO_X BART ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu) (30-day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
LNBs	37	0.30	1,391	$572,010	$411	0.69
SNCR	37	0.30	1,391	1,353,500	973	0.69
SCR	83	0.08	3,120	10,560,612	3,385	1.12

TABLE 17—SUMMARY OF HAYDEN UNIT 2 NO_X BART ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu) (30-day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
LNBs	35	0.24	1,303	$992,729	$762	0.40
SNCR	43	0.21	1,610	1,893,258	1,176	0.48
SCR	81	0.07	3,032	12,321,491	4,064	0.85

Based on its consideration of the five factors, the State has determined that the NO_X BART emission limit for Hayden Unit 1 is 0.08 lb/MMBtu (30-day rolling average) and for Unit 2 is 0.07 lb/MMBtu (30-day rolling average). The State assumes the BART emission limit can met through the installation and operation of SCR.

We agree with the State's conclusions, and we are proposing to approve its NO_X BART determinations for Hayden Unit 1 and Unit 2.

PM BART Determination

Hayden Units 1 and 2 are each equipped with fabric filter baghouses to control PM emissions with an emission limit of 0.03 lb/MMBtu. Stack tests show that the fabric filter baghouses are achieving a 99% reduction in PM. Fabric filter baghouses are the most stringent control technology for controlling PM emissions. The State also evaluated what would constitute the most stringent level of control for PM by looking at recent BACT determinations. Based on this evaluation, the State determined that an emission limit of 0.03 lb/MMBtu represents the most stringent level of control for this type of source. Consistent with the BART Guidelines, the State did not provide a full five-factor analysis because the State determined BART to be the most stringent control technology and limit. The State has determined that the PM BART emission limit is 0.03 lb/MMBtu (30-day rolling average) for Hayden Unit 1 and Unit 2. The State assumes the BART emission limit can be met through the operation of the current fabric filter baghouses.

We agree with the State's conclusions, and we are proposing to approve its PM BART determinations for Hayden Unit 1 and Unit 2.

vi. CSU Martin Drake Units 5, 6, and 7

Background

The CSU's Martin Drake facility is located in Colorado Springs, Colorado. This facility consists of three steam driven turbine/generator units, Units 5, 6, and 7, and the associated equipment needed for generating electricity. Units 5, 6, and 7 are the only BART-eligible units at the facility. These units fire coal as the primary fuel and use natural gas for backup and startup. All three boilers are pulverized-coal, dry-bottom, front-fired boilers. The State's BART determination for CSU Martin Drake can be found in Chapter 6.4.3.6 and Appendix C of the SIP.

SO_2 BART Determination

Martin Drake Units 5, 6, and 7 are currently uncontrolled for SO_2. The State determined that DSI was technically feasible for all three units and that dry FGD was technically feasible for Units 6 and 7. The State determined dry FGD was not technically feasible for Unit 5 because of space constraints surrounding this unit. The State also examined emission limit tightening based on current operations for Unit 5.

The State did not identify any energy or non-air quality environmental impacts that would preclude the selection of any of the controls evaluated, nor are there any remaining-useful-life issues for this source. Baseline SO_2 emissions are 1,269 tpy for Unit 5, 2,785 tpy for Unit 6, and 4,429 tpy for Unit 7 based on an average of 2006–2008 actual emissions. A summary of the State's SO_2 BART analysis and the visibility impacts is provided in Tables 18, 19, and 20 below. The emission rate for each control option in the tables is reflective of the 30-day rolling average contained in the State's BART analysis.

TABLE 18—SUMMARY OF MARTIN DRAKE UNIT 5 SO_2 BART ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu) (30-day rolling average)	Emission reduction (tpy)	Annualized costs	Cost Effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
DSI	60	0.26	762	$1,340,663	$1,760	0.12

TABLE 19—SUMMARY OF MARTIN DRAKE UNIT 6 SO_2 BART ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu) (30-day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
DSI	60	0.34	1,671	$2,234,438	$1,741	0.18
Dry FGD	82	0.15	3,632	6,186,854	2,709	0.24
Dry FGD	85	0.13	2,368	6,647,835	2,808	0.25

TABLE 19—SUMMARY OF MARTIN DRAKE UNIT 6 SO_2 BART ANALYSIS—Continued

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu) (30-day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
Dry FGD	90	0.09	2,507	7,452,788	4,064	0.26

TABLE 20—SUMMARY OF MARTIN DRAKE UNIT 7 SO_2 BART ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu) (30-day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
DSI	60	0.35	2,657	$3,732,826	$1,405	0.29
Dry FGD	82	0.16	3,632	8,216,863	2,263	0.39
Dry FGD	85	0.13	3,764	8,829,321	2,345	0.40
Dry FGD	90	0.09	3,986	9,898,382	2,483	0.41

The State also examined emission limits tightening based on current operations for Unit 5. (The State did not evaluate emissions limit tightening on Units 6 and 7 because the State determined BART to be the most stringent control technology). In order to evaluate emissions limit tightening, the State analyzed actual emission data for Unit 5 from the baseline period of 2006–2008. The State found that the maximum 30-day rolling emission rate for Unit 5 was 0.83 lb/MMBtu. The State applied a 5 percent buffer to the maximum 30-day rolling emission rate because the Drake facility has limited coal storage capacity and blends four different types of coals. These factors can lead to a greater fluctuation in emissions. Assuming no new control technology for Unit 5 and a 5 percent buffer, the State determined that an appropriate SO_2 emission limit would be 0.9 lb/MMBtu on a 30-day rolling average, which is less control than would be achieved with DSI.

Based upon its consideration of the five factors, the State determined that the following are the SO_2 BART limits for Drake Units 5, 6, and 7: 0.26 lb/MMBtu (30-day rolling average) for Unit 5; 0.13 lb/MMBtu (30-day rolling average) for Unit 6; and 0.13 lb/MMBtu (30-day rolling average) for Unit 7. The State assumes the BART emission limits can be met with the installation and operation of DSI on Unit 5 and the installation and operation of dry FGD on Unit 6 and Unit 7. The State determined that a lower emissions limit (0.09 lb/MMBtu) for Units 6 and 7 was not reasonable because the increased control costs to achieve such an emissions limit would not provide significant improvements in visibility (0.01 delta dv for each unit respectively).

We agree with the State's conclusions, and we are proposing to approve its SO_2 BART determinations for Martin Drake Unit 5, Unit 6, and Unit 7.

NO_X BART Determination

Martin Drake Units 5, 6, and 7 are currently controlled with LNBs achieving 54.7%, 52.8%, and 57.7% control, respectively. The State's BART analysis shows that OFA, ULNBs, ULNBs plus OFA, SNCR, SNCR plus ULNBs, and SCR are technically feasible for reducing NO_X emissions at Drake Units 5, 6 and 7. The State determined that RRI, ECO, and coal reburn plus SNCR were technically infeasible.

The State did not identify any energy or non-air quality environmental impacts that would preclude the selection of any of the controls evaluated, nor are there any remaining-useful-life issues for this source. Baseline NO_X emissions are 768 tpy for Unit 5, 1,413 tpy for Unit 6, and 2,081 tpy for Unit 7 based on an average of 2006–2008 actual emissions. A summary of the State's NO_X BART analysis and the visibility impacts is provided in Tables 21, 22, and 23 below. The emission rate for each control option in the tables is reflective of the 30-day rolling average contained in the State's BART analysis.

TABLE 21—SUMMARY OF MARTIN DRAKE UNIT 5 NO_X BART ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu) (30-day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
OFA	20	0.35	154	$141,844	$923	0.07
ULNBs	26	0.32	200	147,000	736	0.08
ULNBs + OFA	28	0.31	215	288,844	1,342	0.08
SNCR	30	0.30	231	1,011,324	4,387	0.08
ULNB/SCR layered approach	81.5	0.08	626	4,467,000	7,133	0.12
SCR	81.5	0.08	626	4,580,349	7,314	0.12

TABLE 22—SUMMARY OF MARTIN DRAKE UNIT 6 NO_X BART ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu) (30-day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)	Visibility improvement (Delta dv for the maximum 98th percentile impact)
OFA	20	0.38	283	$104,951	$371	0.18
SNCR	30	0.33	424	1,208,302	2,851	0.19
ULNBs	32	0.32	452	232,800	515	0.20
ULNBs + OFA	36	0.31	509	337,751	664	0.19
ULNB/SCR layered approach	83	0.08	1,175	6,182,800	5,260	0.27
SCR	83	0.08	1,175	6,340,797	5,395	0.27

TABLE 23—SUMMARY OF MARTIN DRAKE UNIT 7 NO_X BART ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu) (30-day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)	Visibility improvement (Delta dv for the maximum 98th percentile impact)
OFA	20	0.36	416	$75,217	$181	0.22
SNCR	28	0.33	583	386,000	662	0.24
ULNBs	30	0.32	624	2,018,575	3,233	0.26
ULNBs + OFA	36	0.29	749	461,217	616	0.24
ULNB/SCR layered approach	80	0.08	1,709	8,196,000	4,797	0.37
SCR	80	0.08	1,709	8,510,067	4,981	0.37

The State determined that ULNBs plus OFA constitute BART based on the low dollars-per-ton control costs and the visibility improvement afforded by this control technology. The State did not choose SNCR as that technology provides a similar level of NO_X reduction and visibility improvement as ULNBs plus OFA, but at a higher cost per ton of pollutant removed. The State determined SCR was not cost effective for any of the units when compared with the visibility improvement.

Based upon its consideration of the five factors, the State determined that the following are the NO_X BART limits for Drake Units 5, 6, and 7: 0.31 lb/MMBtu (30-day rolling average) for Unit 5 and Unit 6; and 0.29 lb/MMBtu (30-day rolling average) for Unit 7. The State assumes that the BART emission limits can be achieved through the installation and operation of ULNBs plus OFA.

We agree with the State's conclusions, and we are proposing to approve the State's NO_X BART determinations for Martin Drake Units 5, 6, and 7.

PM BART Determination

Martin Drake Units 5, 6, and 7 are each equipped with fabric filter baghouses to control PM emissions with an emission limit of 0.03 lb/MMBtu. Stack tests show that the fabric filter baghouses are achieving a 95% reduction in PM. Fabric filter baghouses are the most stringent control technology for controlling PM emissions. The State also evaluated what would constitute the most stringent level of control for PM by looking at recent BACT determinations. Based on this evaluation, the State determined that an emission limit of 0.03 lb/MMBtu represents the most stringent level of control for this type of source. Consistent with the BART Guidelines, the State did not provide a full five-factor analysis because the State determined BART to be the most stringent control technology and limit.

The State has determined that 0.03 lb/MMBtu (30-day rolling average) is the PM BART limit for Martin Drake Units 5, 6, and 7. The State assumes the limits can be met with the operation of the current fabric filter baghouses.

We agree with the State's conclusions, and we are proposing to approve its PM BART determinations for Martin Drake Units 5, 6, and 7.

Summary of Colorado's BART Determinations

Table 24 provides a summary of the State's BART determinations that we are proposing to approve.

TABLE 24—SUMMARY OF THE STATE'S BART DETERMINATIONS EPA IS PROPOSING TO APPROVE

Emission unit	Assumed NO_X control type	NO_X emission limit	Assumed SO_2 control type	SO_2 emission limit	Assumed particulate control and emission limit
Cemex-Lyons Kiln	SNCR	255.3 lbs/hr (30-day rolling average) 901.0 tpy (12-month rolling average).	None	25.3 lbs/hr (12-month rolling average) 95.0 tpy (12-month rolling average).	Fabric Filter Baghouse * 0.275 lb/ton of dry feed 20% opacity.
Cemex-Lyons Dryer	None	13.9 tpy	None	36.7 tpy	Fabric Filter Baghouse * 22.8 tons/yr 10% opacity.

TABLE 24—SUMMARY OF THE STATE'S BART DETERMINATIONS EPA IS PROPOSING TO APPROVE—Continued

Emission unit	Assumed NO_X control type	NO_X emission limit	Assumed SO_2 control type	SO_2 emission limit	Assumed particulate control and emission limit
CENC Unit 4	LNBs with OFA	0.37 lb/MMBtu (30-day rolling average) Or 0.26 lb/MMBtu Combined Average for Units 4 & 5 (30-day rolling average).	None	1.0 lb/MMBtu (30-day rolling average).	Fabric Filter Baghouse * 0.07 lb/MMBtu.
CENC Unit 5	LNBS with SOFA and SNCR.	0.19 lb/MMBtu (30-day rolling average) Or 0.26 lb/MMBtu Combined Average for Units 4 & 5 (30-day rolling average).	None	1.0 lb/MMBtu (30-day rolling average).	Fabric Filter Baghouse * 0.07 lb/MMBtu.
Comanche Unit 1	LNBs *	0.20 lb/MMBtu (30-day rolling average) 0.15 lb/MMBtu (combined annual average for units 1 & 2).	Lime Spray Dryer *	0.12 lb/MMBtu (30-day rolling average) 0.10 lb/MMBtu (combined annual average for units 1 & 2).	Fabric Filter Baghouse * 0.03 lb/MMBtu.
Comanche Unit 2	LNBs*	0.20 lb/MMBtu (30-day rolling average) 0.15 lb/MMBtu (combined annual average for units 1 & 2).	Lime spray Dryer *	0.12 lb/MMBtu (30-day rolling average) 0.10 lb/MMBtu (combined annual average for units 1 & 2).	Fabric Filter Baghouse * 0.03 lb/MMBtu.
Craig Unit 1	SNCR	0.28 lb/MMBtu (30-day rolling average).	Wet Limestone scrubber *.	0.11 lb/MMBtu (30-day rolling average).	Fabric Filter Baghouse * 0.03 lb/MMBtu.
Craig Unit 2	SCR	0.08 lb/MMBtu (30-day rolling average).	Wet Limestone scrubber *.	0.11 lb/MMBtu (30-day rolling average).	Fabric Filter Baghouse * 0.03 lb/MMBtu.
Hayden Unit 1	SCR	0.08 lb/MMBtu (30-day rolling average).	Lime Spray Dryer *	0.13 lb/MMBtu (30-day rolling average).	Fabric Filter Baghouse * 0.03 lb/MMBtu.
Hayden Unit 2	SCR	0.07 lb/MMBtu (30-day rolling average).	Lime Spray Dryer *	0.13 lb/MMBtu (30-day rolling average).	Fabric Filter Baghouse * 0.03 lb/MMBtu.
Martin Drake Unit 5	ULNBs with OFA	0.31 lb/MMBtu (30-day rolling average).	Dry Sorbent Injection.	0.26 lb/MMBtu (30-day rolling average).	Fabric Filter Baghouse * 0.03 lb/MMBtu.
Martin Drake Unit 6	ULNBs with OFA	0.31 lb/MMBtu (30-day rolling average).	Lime Spray Dryer or Equivalent Control Technology.	0.13 lb/MMBtu (30-day rolling average).	Fabric Filter Baghouse * 0.03 lb/MMBtu.
Martin Drake Unit 7	ULNBs with OFA	0.29 lb/MMBtu (30-day rolling average).	Lime Spray Dryer or Equivalent Control Technology.	0.13 lb/MMBtu (30-day rolling average).	Fabric Filter Baghouse * 0.03 lb/MMBtu.

* Indicates controls that are already installed.

vii. PSCO BART Alternative

Colorado has adopted the PSCO BART Alternative Program (BART alternative) to meet the requirements for BART for PSCO Cherokee Unit 4, Valmont Unit 5, and Pawnee Station Unit 1 and RP for PSCO Arapahoe Units 3 and 4 and Cherokee Units 1, 2, and 3. Under 40 CFR 51.308(e)(2), states may choose to meet the BART requirements with a BART alternative. Section 51.308(e)(2) specifies the requirements that a state must meet to show that the alternative measure or alternative program achieves greater RP than would be achieved through the installation and operation of BART. Section 51.308(e)(3) contains additional requirements that states must address pertaining to their alternative program. Table 25 provides a summary of the units covered under the BART alternative, as well as the required control or shutdown date for the facility.

TABLE 25—SOURCES COVERED UNDER THE PSCO BART ALTERNATIVE

Unit	BART eligible?	NO_X control type	NO_X emission uimit	SO_2 control type	SO_2 emission limit	Particulate type and limit
Cherokee Unit 1	No	Shutdown by 7/1/2012.	0	Shutdown by 7/1/2012.	0	Shutdown by 7/1/2012.
Cherokee Unit 2	No	Shutdown by 12/31/2011.	0	Shutdown by 12/31/2011.	0	Shutdown by 12/31/2011.
Cherokee Unit 3	No	Shutdown by 12/31/2016.	0	Shutdown by 12/31/2016.	0	Shutdown by 12/31/2016.

TABLE 25—SOURCES COVERED UNDER THE PSCO BART ALTERNATIVE—Continued

Unit	BART eligible?	NO_X control type	NO_X emission uimit	SO_2 control type	SO_2 emission limit	Particulate type and limit
Cherokee Unit 4	Yes	Natural Gas Operation by 12/31/2017.	0.12 lb/MMBtu (30-day rolling average) by 12/31/2017.	Natural Gas Operation by 12/31/2017.	7.81 tpy (12 month rolling average).	Fabric Filter Baghouse * 0.03 lb/MMBtu.
Valmont Unit 5	Yes	Shutdown by 12/31/2017.	0	Shutdown by 12/31/2017.	0	Shutdown by 12/31/2017.
Pawnee Unit 1	Yes	SCR **	0.07 lb/MMBtu (30-day rolling average) by 12/31/2014.	Lime Spray Dryer **	0.12 lb/MMBtu (30-day rolling average) by 12/31/2014.	Fabric Filter Baghouse * 0.03 lb/MMBtu.
Arapahoe Unit 3	No	Shutdown by 12/31/2013.	0	Shutdown by 12/31/2013.	0	Shutdown by 12/31/2013.
Arapahoe Unit 4	No	Natural Gas Operation by 12/31/2014.	600 tpy (12 month rolling average) by 12/31/2014.	Natural Gas operation by 12/31/2014.	1.28 tpy (12 month rolling average) by 12/31/2014.	Fabric Filter Baghouse * 0.03 lb/MMBtu.

* Controls are already installed.
** The State assumes this is the control technology the source will use to meet the limit.

A summary of Colorado's BART alternative and the requirements under 40 CFR 51.308(e)(2) and (e)(3) are discussed below. The State's analysis of the PSCO BART alternative can be found in Chapter 6.4.3.7 of the SIP.

i. A List of All BART-Eligible Sources

Pursuant to 40 CFR 51.308(e)(2)(i)(A), the State included a list of all BART-eligible sources in the State in Chapter 6, Table 6–3 of the SIP. A list of BART-eligible sources can also be found in Table 2 of this notice.

ii. A List of All Sources Covered by the Alternative

Pursuant to 40 CFR 51.308(e)(2)(i)(B), the State included in the SIP a list of the BART-eligible sources that are included in the BART alternative, as well as the RP sources covered under the program.

iii. Best System of Continuous Emission Control Technology

As required by 40 CFR 51.308(e)(2)(i)(C), the State determined the best system of continuous emission control for sources that are subject to BART and that are covered by the BART alternative program. Because the State's BART alternative program was designed to meet requirements other than BART,[17] our regulation allowed the State to use simplifying assumptions to determine the best system of continuous emission control for the BART sources in the State's BART alternative program. 40 CFR 51.308(e)(2)(i)(C); 71 FR 60619. We have indicated that our BART presumptive limits for SO_2 and NO_X, set forth in our BART Guidelines (70 FR 39171–39172), represent appropriate simplifying assumptions for determining the best system of continuous emission control for EGUs. The presumptive limit for SO_2 is 0.15 lb/MMBtu. The presumptive limits for NO_X vary depending on boiler and coal type. The State used the presumptive limits in the BART Guidelines for calculating the best system of continuous emission control for the BART sources in the State's BART alternative program. The State also used the presumptive limits as a benchmark for control levels that might have been anticipated from the non-BART sources that are included in the BART alternative, if the State had not adopted the BART alternative.

iv. Projected Emissions Reductions

Pursuant to 40 CFR 51.308(e)(2)(i)(D), the State provided a calculation of the emission reductions expected from the BART alternative compared to emissions reductions that would be achieved by the application of the presumptive limits to sources covered under the alternative. Tables 26 and 27 show the relative emissions.

TABLE 26—SO_2 REDUCTIONS UNDER THE BART ALTERNATIVE

Unit	SO_2 average emissions 2006–2008 (tpy)	SO_2 emissions with presumptive limits (0.15 lb/MMBtu)	SO_2 emissions under BART alternative in 2018 (tpy)
Arapahoe Unit 3	924.97	328.51	0.00
Arapahoe Unit 4	1,764.70	640.93	1.28
Cherokee Unit 1	2,220.80	623.35	0.00
Cherokee Unit 2	1,888.37	418.95	0.00
Cherokee Unit 3	743.00	611.99	0.00
Cherokee Unit 4	2,135.43	1,953.57	7.81
Valmont Unit 5	758.47	1,029.19	0.00
Pawnee Unit 1	13,472.07	3,007.03	2,405.63
Total	23,908	8,614	2,415

[17] Specifically, the program was designed to help the State achieve its overarching reasonable progress goals and to meet the requirements of Colorado House Bill 10–1365 and § 40–3.2–202, C.R.S.—Colorado's Clean Air-Clean Jobs Act.

TABLE 27—NO_X REDUCTIONS UNDER THE BART ALTERNATIVE

Unit	NO_X average emissions 2006–2008 (tpy)	NO_X presumptive limit (lb/MMBtu)	NO_X emissions with presumptive limits (tpy)	NO_X emissions under BART alternative in 2018 (tpy)
Arapahoe Unit 3	1,770.47	0.23	503.71	0.00
Arapahoe Unit 4	1,147.67	0.23	982.77	900.00
Cherokee Unit 1	1,556.23	0.39	1,620.71	0.00
Cherokee Unit 2	2,895.20	0.39	1,089.27	0.00
Cherokee Unit 3	1,865.50	0.39	1,591.18	0.00
Cherokee Unit 4	4,274.00	0.28	3,646.67	2,062.86
Valmont Unit 5	2,313.73	0.28	1,921.15	0.00
Pawnee Unit 1	4,537.73	0.23	4,610.78	1,403.28
Total	20,361	.....	15,996	4,366

v. Evidence That the Alternative Program Achieves Greater RP Than BART

Tables 26 and 27 demonstrate that the State's BART Alternative achieves greater RP than would be achieved through the installation of BART. By applying presumptive limits to the sources, the resulting emissions would be 8,614 tpy for SO_2 and 15,996 tpy for NO_X. Under the BART alternative, the emissions from the sources in 2018 will be 2,415 tpy for SO_2 and 4,366 tpy for NO_X. Thus, EPA concludes that the BART alternative achieves greater RP than would be achieved through the installation of BART and meets the requirements of 40 CFR 51.308(e)(2)(i)(E).

vi. All Emission Reductions Take Place During First Planning Period

Pursuant to 40 CFR 51.308(e)(2)(ii), Table 25 shows that all controls under the BART alternative will occur by December 17, 2017, within the first planning period, which ends in December 2018.

vii. Reductions Are Surplus

As required by 40 CFR 51.308(e)(2)(iv), the State has concluded that emission controls associated with the BART alternative have not been used for other SIP purposes and are only a requirement under the RH SIP. The State has thus determined they are surplus. EPA agrees with the State's assessment.

viii. Distribution of Emissions

The State has determined that the distribution of emissions under the BART alternative is not substantially different than under source-by-source BART or RP. The BART alternative includes only sources that are BART or RP sources and does not include any sources that would not have been included in the RH SIP. All of the units in the BART alternative are located within or adjacent to the 8-hour ozone non-attainment area in the Front Range of Colorado. Pursuant to 40 CFR 51.308(e)(3), since the State has determined that the geographic distribution of emissions is not substantially different under the alternative program, the State is not required to perform visibility modeling. We agree that the BART alternative will not result in a significant shift in the distribution of emissions.

EPA is proposing to approve the State's BART alternative as it meets the requirements for alternative programs under 40 CFR 51.308(e)(2) and (e)(3).

D. Reasonable Progress Requirements

In order to establish RPGs for its Class I areas, and to determine the controls needed for the long-term strategy, Colorado followed the process established in the RHR. First, Colorado identified the anticipated visibility improvement in 2018 in all its Class I areas using the WRAP Community Multi-Scale Air Quality (CMAQ) modeling results. This modeling identified the extent of visibility improvement from the baseline by pollutant for each Class I area. The modeling relied on projected source emission inventories, which included enforceable Federal and State regulations already in place and anticipated BART controls.

Colorado then identified sources and source categories (other than BART sources) in Colorado that are major contributors to visibility impairment and considered whether these sources should be controlled based on a consideration of the factors identified in the CAA and EPA's regulations. *See* CAA 169A(g)(1) and 40 CFR 51.308(d)(1)(i)(A).

The SIP includes Colorado's analysis and conclusion that reasonable progress will be made by 2018, including an analysis of pollutant trends, emission reductions, and improvements expected. The RP discussion and analyses are included in Chapter 8 and Appendix D of the SIP. We are proposing to approve Colorado's submitted RP goals as described more fully below.

1. Visibility Impairing Pollutants and Sources

a. Source Regions of Pollutants

In order to determine the significant sources contributing to haze in Colorado's Class I areas, Colorado relied upon two source apportionment analysis techniques developed by the WRAP. The first technique was regional modeling using the Comprehensive Air Quality Model (CAMx) and the PM Source Apportionment Technology (PSAT) tool, used for the attribution of sulfate and nitrate sources only. The second technique was the Weighted Emissions Potential (WEP) tool, used for attribution of sources of OC, EC, $PM_{2.5}$, and PM_{10}. The WEP tool is based on emissions and residence time, not modeling.

PSAT uses the CAMx air quality model to show nitrate-sulfate-ammonia chemistry and apply this chemistry to a system of tracers or ''tags'' to track the chemical transformations, transport, and removal of NO_X and SO_2. These two pollutants are important because they tend to originate from anthropogenic sources. Therefore, the results from this analysis can be useful in determining contributing sources that may be controllable, both in-state and in neighboring states.

WEP is a screening tool that helps to identify source regions that have the potential to contribute to haze formation at specific Class I areas. Unlike PSAT, this method does not account for chemistry or deposition. The WEP combines emissions inventories, wind patterns, and residence times of air

masses over each area where emissions occur, to estimate the percent contribution of different pollutants. Like PSAT, the WEP tool compares baseline values (2000–2004) to 2018 values, to show the improvement expected by 2018, for sulfate, nitrate, OC, EC, $PM_{2.5}$, and PM_{10}. More information on the WRAP modeling methodologies is available in the document *Technical Support Document for Technical Products Prepared by the Western Regional Air Partnership (WRAP) in Support of Western Regional Haze Plans* in the Supporting and Related Materials section of the docket. Table 28 shows Colorado's contribution to extinction at its own Class I areas. Sulfate and nitrate contribution is based on PSAT results and OC, EC, $PM_{2.5,}$ PM_{10}, and sea salt contributions are based on WEP.

TABLE 28—COLORADO SOURCES EXTINCTION CONTRIBUTION 2000–2004 FOR 20% WORST DAYS

Class I area	Pollutant species	2000–2004 extinction (Mm^{-1})	Species contribution to total extinction (%)	CO sources contribution to species extinction (%) [1]
GRSA1 (Great Sand Dunes National park and Preserve).	Sulfate	5.97	21.1	13.0
	Nitrate	1.96	6.9	14.7
	OC	8.47	30.0	34.8
	EC	1.74	6.2	39.1
	$PM_{2.5}$	2.81	10.0	34.9
	PM_{10}	7.24	25.6	37.7
	Sea Salt	0.05	0.2	*
MEVE1 (Mesa Verde National Park)	Sulfate	6.46	19.9	2.0
	Nitrate	2.30	7.1	10.4
	OC	12.28	37.8	35.4
	EC	2.37	7.3	35.4
	$PM_{2.5}$	2.51	7.7	19.0
	PM_{10}	6.52	20.1	15.3
	Sea Salt	0.04	0.1	*
MOZI1 (Mount Zirkel and Rawah Wilderness Area).	Sulfate	5.25	22.69.3	26.9
	Nitrate	2.16		39.7
	OC	9.94	42.7	90.7
	EC	1.76	7.6	87.9
	$PM_{2.5}$	0.98	4.2	51.8
	PM_{10}	3.15	13.5	48.5
	Sea Salt	0.02	0.1	*
RMHQ1 (Rocky Mountain National Park)	Sulfate	7.91	24.3	31.3
	Nitrate	5.26	16.2	37.8
	OC	10.51	32.3	77.4
	EC	2.56	7.9	77.1
	$PM_{2.5}$	1.37	4.2	49.9
	PM_{10}	4.90	15.1	52.2
	Sea Salt	0.01	0.0	*
WEMI1 (Weminuche Wilderness, Black Canyon of the Gunnison, and La Garita Wilderness).	Sulfate	4.99	23.9	5.0
	Nitrate	1.21	5.8	5.0
	OC	8.29	39.7	47.7
	EC	2.01	9.6	45.1
	$PM_{2.5}$	1.26	6.0	20.7
	PM_{10}	2.99	14.3	18.4
	Sea Salt	0.13	0.6	.....
WHRI1 (Eagles Nest Wilderness, Flat Tops Wilderness, Maroon Bells—Snowmass Wilderness, and West Elk Wilderness).	Sulfate	4.79	24.3	6.5
	Nitrate	1.31	6.6	20.0
	OC	7.83	39.7	60.6
	EC	1.76	8.9	61.1
	$PM_{2.5}$	1.18	6.0	39.7
	PM_{10}	2.82	14.3	35.8
	Sea Salt	0.02	0.1	*

* Not modeled by the WRAP.

Table 29 shows influences from sources both inside and outside of Colorado per the PSAT modeling for 2018. As indicated, boundary conditions or outside domain are the highest contributor to sulfate at all Colorado Class I areas. The boundary conditions represent the background concentrations of pollutants that enter the edge of the modeling domain. Depending on meteorology and the type of pollutant (particularly sulfate), these emissions can be transported great distances that can include regions such as Canada, Mexico, and the Pacific Ocean.

Colorado appears to be a major contributor of particulate sulfate at those Class I areas near significant sources of SO_2, specifically Rocky Mountain National Park, Mount Zirkel, and Rawah Wilderness. For nitrate, Colorado appears to be a major contributor at most of its Class I areas except for the Weminuche Wilderness, La Garita Wilderness, and Black Canyon of Gunnison National Park. Boundary conditions are also a major contributor of nitrate at all Colorado Class Iareas.

[18] OD denotes Outside Domain; MEX denotes the country of Mexico; CEN denotes the Central Regional Air Partnership; PO denotes Pacific Offshore.

TABLE 29—PSAT SOURCE REGION APPORTIONMENT FOR 20% WORST DAYS

Class I Area:		2018 Sulfate PSAT				2018 Nitrate PSAT			
GRSA1 (Great Sand Dunes National Park and Preserve).	Region [18]	OD	CO	NM	MEX	OD	NM	CO	CEN
	% Contribution	38.2	9.7	8.1	7.9	28.9	27.2	12.3	8.8
MEVE1 (Mesa Verde National Park)	Region	OD	NM	MEX	AZ	NM	CO	OD	AZ
	% Contribution	35.4	17.2	11.3	10.2	60.2	12.3	9.7	9.7
MOZI1 (Mount Zirkel and Rawah Wilderness Area).	Region	OD	CO	WY	UT	CO	OD	UT	WY
	% Contribution	29.3	20.9	9.2	7.6	41.6	17.8	14.1	10.3
RMHQ1 (Rocky Mountain National Park)	Region	OD	CO	WY	CEN	CO	OD	WY	UT
	% Contribution	29.1	23.5	7.7	7.2	33.7	15.8	11.0	5.9
WEMI1 (Weminuche Wilderness, Black Canyon of the Gunnison, and La Garita Wilderness).	Region	OD	NM	MEX	PO	NM	OD	CA	AZ
	% Contribution	34.9	13.2	10.7	9.1	43.7	19.7	14.1	9.9
WHRI1 (Eagles Nest Wilderness, Flat Tops Wilderness, Maroon Bells—Snowmass Wilderness, and West Elk Wilderness).	Region	OD	MEX	AZ	NM	OD	UT	CO	NM
	% Contribution	40.1	10.8	6.8	6.1	55.0	20.0	15.0	10.0

b. Source Categories

The State conducted a detailed evaluation of six visibility impairing pollutants: nitrates, sulfates, OC, EC, fine soil and coarse mass (CM) (fine soil and CM are collectively known as PM) contributing to visibility impairment at Colorado's Class I areas.[19] The State relied on WRAP emission inventory information and modeling to determine what pollutants and sources were contributing to visibility impairment at its Class I areas. Once the State determined what sources were contributing to visibility impairment and by what amount, it determined whether the source/source category was significant and if it was reasonable to control.

Based on its analysis, the State determined that the sources of OC, EC, and area source PM are not well documented because of emission inventory limitations associated with natural sources (predominantly wildfires), uncertainty of windblown emissions, and poor model performance for these constituents. The State determined it would defer on addressing these pollutants until science and emission inventories are improved for consideration in future RH SIPs. The State determined that RP controls would be evaluated for SO_2, NO_X, and stationary source PM.

The State's analysis evaluated the projected sources of SO_2 and NO_X in 2018. The State's analysis shows that 78% of 2018 total statewide SO_2 emissions are from point sources, mainly coal-fired boilers. Area source SO_2 emissions (14% of total SO_2 emissions) are mainly comprised of thousands of small commercial boilers and internal combustion engines spread throughout the State that burn distillate fuel. The State determined there is no practical way to control thousands of small boilers and engines. The State determined SO_2 emissions from natural fires constitute 6% of total SO_2 emissions and are considered uncontrollable. Both off-road and on-road mobile sources each constitute 1% of SO_2 emissions and are subject to federal ultra-low sulfur diesel fuel requirements that limit sulfur content to 15 ppm. Ultra-low sulfur diesel fuel was in widespread use after June 2010 for off-road mobile sources and after June 2006 for on-road mobile sources. The State has determined that point sources are the dominant source of emissions and, for this planning period, the only practical category to evaluate under RP for SO_2.

Colorado's analysis shows that point sources comprise 36% of total NO_X emissions; these emissions are primarily from coal-fired external combustion boilers and natural gas-fired internal combustion engines (in oil and gas compression service). On-road and off-road mobile sources comprise 16% and 14% of Statewide NO_X emissions, respectively. Because mobile exhaust emissions are primarily addressed, and will continue to be addressed, through federal programs, the State did not evaluate mobile sources for RP control in this planning period. Emissions of NO_X from biogenic activity and natural fire are considered uncontrollable and vary from year-to-year. Non-oil and gas area sources comprise about 6% of NO_X emissions and involve thousands of combustion sources that the State determined are not reasonable to control in this planning period. Area oil and gas emissions contribute 12% of total NO_X emissions.

The State has determined that large point sources are the dominant source of NO_X emissions and are practical to evaluate under RP in this planning period. The State determined that smaller point sources (combustion turbines) and area oil and gas emissions, specifically heater-treaters and reciprocating internal combustion engines (RICE), significantly contribute to visibility impairment in Colorado's Class I areas and are also practical to evaluate for RP controls in this planning period.

c. Stationary Sources

The State used a RP screening methodology called ''Q/d'' to determine which stationary (point) sources would be candidates for controls under RP. The methodology Q/d is a calculated ratio that evaluates stationary source emissions (mathematical sum of actual SO_2, NO_X and PM emissions in tons per year, denoted as ''Q'') divided by the distance (in kilometers, denoted as ''d'') of the point source from the nearest Class I area. The State evaluated the visibility impact sensitivity of different Q/d thresholds and determined that a Q/d ratio equal to or greater than 20 approximated a delta dv impact ranging from 0.06 dv to 0.56 dv. The resultant average of the range is about 0.3 dv, which is a more conservative RP threshold than the 0.5 dv that was used in determining which sources would be subject-to-BART under the federal BART regulations. Since the threshold is more conservative than the subject-to-BART threshold, the State determined that a Q/d value of 20 is reasonable for determining which RP sources the State should consider for RP controls.

[19] See *Significant Source Categories Contributing to Regional Haze at Colorado Class I Areas,* October 2, 2007, located in the Supplemental and Related Materials section of the docket.

The evaluation of potential RP sources involved all Colorado stationary sources with actual SO_2, NO_X, or PM_{10} emissions over 100 tpy in 2007. The State identified 113 sources as exceeding the 100 tpy threshold for any of the three pollutants and further analyzed these sources using the Q/d analysis. The State determined that there were seven sources that had a Q/d equal to or greater than the threshold of 20 that were not already being controlled under BART.[20] The State deemed these seven sources to be subject to RP and the State completed a RP analysis for each of the sources.

Table 30 shows the subject-to-RP sources identified by the State.

TABLE 30—RP SOURCES EVALUATED FOR CONTROLS

Source	Q (tpy based on 2007 actual emissions)	Nearest Class I area	Q/d value
Platte River Power Authority—Rawhide Station	2,796	Rocky Mountain National Park	49.9
CENC—Unit 3	4,453	Rocky Mountain National Park	81.7
CSU-Nixon Power Plant—Nixon Unit 1	6,668	Great Sand Dunes National Park	63.9
Black Hills Energy Clark Power Plant Units 1 and 2	2,393	Great Sand Dunes National Park	40.8
Holcim—Kiln and Dryer	3,250	Great Sand Dunes National Park	49.2
Tri-State—Nucla	3,327	Black Canyon National Park	47.1
Tri-State—Craig Unit 3	20,628	Flat Tops Wilderness Area	432.4
PSCO—Cameo Station	3,750	Black Canyon National Park	53.2

We agree with the State's analysis on appropriate source categories and stationary sources to be evaluated under RP.

2. Four Factor Analyses

In determining the measures necessary to make RP, states must take into account the following four factors and demonstrate how they were taken into consideration in selecting RP goals for a Class I area:

- Costs of Compliance;
- Time Necessary for Compliance;
- Energy and Non-air Quality Environmental Impacts of Compliance; and
- Remaining Useful Life of any Potentially Affected Sources. CAA § 169A(g)(1) and 40 CFR 308(d)(1)(i)(A).

The State performed a four factor analysis for each of the RP sources pursuant to 40 CFR 51.308(d)(1)(i)(A).

State NO_X Control Criteria

For potential NO_X controls in the RP context, the State adopted the same screening criteria as used to evaluate potential NO_X BART controls. For further detail, see section V.C.3 above. We have some of the same concerns regarding the use of these criteria for RP as we expressed concerning their use in BART determinations. Nonetheless, as discussed below, we agree with the State's determinations concerning NO_X controls on the RP sources.

SO_2 Controls—Wet and Dry Scrubbing

As it did in the BART context, the State eliminated wet FGD from consideration as a potential RP control for the same reasons—because of negative non-air quality environmental impact on water usage. EPA is proposing that the State has provided adequate justification to eliminate wet FGD as a potential SO_2 RP control.

a. Visibility Improvement Modeling

Colorado concluded that it is also appropriate to consider a fifth factor for evaluating potential RP control options—the degree of visibility improvement that may reasonably be anticipated from the use of the RP controls. Our RP guidance contemplates that states may be able to consider other relevant factors for RP sources (see EPA's *Guidance for Setting Reasonable Progress Goals under the Regional Haze Program,* (''Reasonable Progress Guidance''), pp. 2–3, July 1, 2007), and we find it appropriate to consider visibility improvement when evaluating potential RP controls.

For the RP modeling, the State followed the BART Guidelines. The BART Guidelines provide that states may use the CALPUFF modeling system or another appropriate model to determine the visibility improvement expected at a Class I area from the potential BART control technology applied to the source. Colorado performed CALPUFF modeling to determine the degree of visibility improvement expected at a Class I area based on the controls evaluated for RP for the subject-to-RP sources.

The BART Guidelines also recommend that states develop a modeling protocol for making individual source attributions, and suggest that states may want to consult with EPA and their RPO to address any issues prior to modeling. Colorado used the CALPUFF model for Colorado RP sources in accordance with a protocol it developed titled ''Supplemental BART Analysis CALPUFF Protocol for Class I Federal Area Visibility Improvement Modeling Analysis, revised August 19, 2010,'' which was approved by EPA and is included in the Supplemental Information section of the docket. The Colorado protocol follows recommendations for long range transport described in appendix W to 40 CFR part 51, ''Guideline on Air Quality Models,'' and in EPA's ''Interagency Workgroup on Air Quality Modeling (IWAQM) Phase 2 Summary Report and Recommendations for Modeling Long Range Transport Impacts,'' as recommended by the BART Guidelines. (40 CFR part 51, appendix Y, section III.D.5).

b. Summary of RP Determinations and Limits

For the subject-to-RP sources, the State provided analyses that took into consideration the four factors as required by section 169A(g)(1) of the CAA. The State also included visibility improvement as a fifth factor in its RP analyses for most sources. The State elected to consider EPA's BART Guidelines as relevant to its RP evaluations, in addition to EPA's Reasonable Progress Guidance. A summary of the RP analysis for each source is included in Chapter 8 of the SIP. The State's complete RP analyses, as well as additional technical information and materials, are included in Appendix D of the SIP. EPA is

[20] The State has concluded that it need not reanalyze a source for RP controls for which it has already made a BART determination. This conclusion is consistent with our RP guidance.

proposing to approve the RP determinations submitted by the State for: Platte River Power Authority (PRPA), Rawhide Unit 101; CENC Unit 3; CSU Nixon Power Plant, Nixon Unit 1; Black Hills Energy Clark Power Plant, Units 1 and 2; Holcim Florence Cement Plant; Tri-State Generation, Nucla; Tri-State Generation, Craig Unit 3; and PSCO Cameo Station. A summary of the RP determination for each source is provided below.

i. Platte River Power Authority—Rawhide Unit 101

Background

The PRPA Rawhide Energy Station is located in Larimer County approximately 10 miles north of the town of Wellington, Colorado. Rawhide Unit 101 is a coal-fired steam-driven EGU with a rated electric generating capacity of 305 MW (gross). The Rawhide Station also has five natural-gas-fired combustion turbines. The primary use of these units is to meet PRPA's energy reliability and peak load requirements. The turbines operate on limited, intermittent, and unpredictable schedules as peak loading units. Additionally, the facility includes a number of fugitive dust sources. The State did not do a RP analysis for the turbines or fugitive dust sources since these units fall below the de minimis threshold established by the State.[21] Unit 101 is the only subject-to-RP unit at the facility. The State's RP determination can be found in Chapter 8.5.2.1 and Appendix D of the SIP.

SO_2 RP Determination

Rawhide Unit 101 is currently controlled with a dry FGD achieving over 72 percent SO_2 reduction with a current permit limit of 0.09 lb/MMBtu (annual average). Per the BART Guidelines, for EGUs with preexisting post-combustion SO_2 controls achieving removal efficiencies greater than 50 percent, states should consider cost effective scrubber upgrades designed to improve the system's overall SO_2 removal efficiency (70 FR 39171). Under the BART Guidelines, a state is not required to evaluate the replacement of the current SO_2 controls if the removal efficiency is over 50% (70 FR 39171). We conclude that it is reasonable to follow this approach for evaluating potential RP controls in this initial planning period. Colorado should consider replacement of existing scrubbers in future planning periods. The State's RP analysis evaluated numerous dry FGD upgrades including: (1) Use of performance additives; (2) use of more reactive sorbent; (3) increase the pulverization level of sorbent; and (4) engineering redesign of atomizer or slurry injection system. The State analyzed each possible upgrade and determined that all were technically infeasible for Rawhide Unit 101. The State determined that fuel switching from coal to natural gas was a technically feasible option for Rawhide Unit 101.

The State did not identify any energy or non-air quality environmental impacts that would preclude the selection of any of the controls evaluated, nor are there any remaining-useful-life issues for this source.

Baseline SO_2 emissions are 913 tpy based on an average of 2006–2008 actual emissions. A summary of the State's SO_2 RP analysis and the visibility impacts for fuel switching is provided in Table 31 below.

TABLE 31—SUMMARY OF RAWHIDE UNIT 101 SO_2 RP ANALYSIS

Control technology	Emission rate (lb/MMBtu) (30-day rolling average)	Emission Reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
Fuel Switching	0.00	906	$237,424,331	$262,169	0.87

The State determined it would take PRPA approximately 2–3 years to switch from coal to natural gas. The State determined fuel switching was not reasonable based on the high cost effectiveness value.

The State also assessed emissions limit tightening based on current operations. Rawhide Unit 101's average 30-day rolling emission rate during the baseline period (2006–2008) was 0.09 lb/MMBtu. The maximum 30-day rolling emission rate during this period was 0.11 lb/MMBtu. The State evaluated both these levels as potential emissions limits. The State also evaluated an emission limit of 0.07 lb/MMBtu. Emissions limit tightening to emissions levels currently achieved is a no-cost control option. The State modeled visibility improvement for SO_2 emission limits lower than 0.11 lb/MMBtu. The modeling showed that, compared to an emission limit of 0.11 lb/MMBtu, an emission limit of 0.09 lb/MMBtu would result in 0.01 dvs of visibility improvement, and an emission limit of 0.07 lb/MMBtu would result in 0.03 dvs of visibility improvement.

The State has determined that the SO_2 RP emission limit for Rawhide Unit 101 is 0.11 lb/MMBtu (30-day rolling average), reflecting the actual performance of the current controls. It represents a more stringent limit than the current limit of 0.13 lb/MMBtu (30-day rolling average). The State assumes the RP limit can be achieved by the operation of the current LSD. The State determined a lower SO_2 limit was not reasonable as it would not result in significant visibility improvement (less than 0.02 dv) and would likely result in frequent non-compliance events.

We agree with the State's conclusions, and we are proposing to approve its SO_2 RP determination for PRPA Rawhide Unit 101.

NO_X RP Determination

Rawhide Unit 101 is currently controlled with LNB+ close coupled over fire air + SOFA achieving a 49.6% control. The State determined that enhanced combustion controls (ECC), SNCR, fuel switching from coal to natural gas, and SCR were technically feasible NO_X controls for Rawhide Unit 101. The State determined that RRI, ECO, and coal reburn + SNCR were not technically feasible.

The State did not identify any energy or non-air quality environmental

[21] For the purposes of evaluating RP, the State has elected to set de minimis thresholds for any emission unit at a subject-to-RP source with actual baseline emissions of SO_2, NO_X, or PM_{10} less than the federal Prevention of Significant Deterioration (PSD) significance levels. These *de minimis* levels are as follows: NOx—40 tons per year; SO_2—40 tons per year; PM_{10}—15 tons per year. Any unit emitting below these levels is not subject to an RP analysis. The BART Guidelines allow for states to set de minimis levels (see 70 FR 39161), and we think it was reasonable for the State to set *de minimis* levels for RP sources.

impacts that would preclude the selection of any of the controls evaluated, nor are there any remaining-useful-life issues for this source. Baseline NO_X emissions are 1,866 tpy based on an average of 2006–2008 actual emissions. A summary of the State's NO_X BART analysis and the visibility impacts is provided in Table 32 below. The emission rate for each control option in the table is reflective of the 30-day rolling average contained in the State's RP analysis.

TABLE 32—SUMMARY OF RAWHIDE UNIT 101 NO_X RP ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu) (30-day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
ECC	24	0.145	448	$288,450	$644	0.45
SNCR	27	0.140	504	1,596,000	3,168	0.46
Fuel Switching	29	0.135	545	237,424,331	435,681	0.47
SCR	63.5	.07	1,185	12,103,000	10,214	0.59

The State estimates that the time necessary for compliance after SIP approval would be approximately 2–3 years for SNCR and 3–4 years for SCR. ECC could be functional within 6 months of SIP approval.

The State eliminated switching to natural gas and SCR from consideration due to the high cost effectiveness values and associated degree of visibility improvement. The State determined that ECC was reasonable for RP control. The State made this determination based on the cost effectiveness and visibility improvement associated with ECC. SNCR would achieve similar emissions reductions to ECC and would afford a minimal additional visibility benefit (0.01 delta dv), but it would do so at a significantly higher dollar-per-ton control cost compared to the selected ECC. Thus, the State determined that SNCR was not reasonable. Based upon its consideration of the five factors that it used for RP, the State determined that the NO_X RP emission limit for Rawhide Unit 101 is 0.145 lb/MMBtu (30-day rolling average). The State assumes that the RP emission limit can be achieved through the operation of ECC.

We agree with the State's conclusions, and we are proposing to approve its NO_X RP determination for PRPA Rawhide Unit 101.

PM RP Determination

Rawhide Unit 101 is equipped with fabric filter baghouses to control PM emissions with an emission limit of 0.03 lb/MMBtu. Stack tests show that the fabric filter baghouses are achieving a 99% reduction in PM. Fabric filter baghouses are the most stringent control technology for controlling PM emissions. The State also evaluated what would constitute the most stringent level of control for PM by looking at recent BACT determinations. Based on this evaluation, the State determined that an emission limit of 0.03 lb/MMBtu represents the most stringent level of control for this type of source. The State did not provide a full four-factor analysis plus visibility improvement modeling because the State determined RP to be the most stringent control technology and limit.

The State has determined that the PM RP emission limit for Rawhide Unit 101 is 0.03 lb/MMBtu (30-day rolling average). The State assumes that the emission limit can be achieved through the operation of the existing fabric filter baghouses.

We agree with the State's conclusions, and we are proposing to approve its PM RP determination for PRPA Rawhide Unit 101.

ii. CENC Boiler 3

Background

The CENC facility includes five coal-fired boilers (Boilers 1–5) that supply steam and electrical power to Coors Brewery. Of these five Boilers, Boilers 4 and 5 are subject to BART and Boiler 3 is subject to RP. Boiler 3 is a 225 MMBtu/hr boiler. The State did not evaluate Boiler 1, Boiler 2, or fugitive dust sources at the facility for RP controls since emissions from these units were below the State's de minimis levels. The State's RP determination for CENC Boiler 3 can be found in Chapter 8.5.2.2 and Appendix D of the SIP.

SO_2 RP Determination

CENC Boiler 3 is currently uncontrolled for SO_2. The State determined that DSI and fuel switching to natural gas were technically feasible for reducing SO_2 emissions from Boiler 3. The State determined that dry FGD is not technically feasible for Boiler 3 due to space constraints onsite. Boiler 3's load range varies from low loads (ready to respond in the event of a malfunction in Boiler 4 or Boiler 5), medium loads (increased customer steam loads) to high loads (during Boiler 4 or Boiler 5 overhauls). The load range varies within the month and has patterns throughout the year. Because of the varying loads, the State has reasoned that a longer-than-three-year average of emissions is needed to determine baseline emissions. The State determined that a baseline average from 2000–2008 represents a reasonable depiction of actual emissions from this unit.

The State did not identify any energy or non-air quality environmental impacts that would preclude the selection of any of the controls evaluated, nor are there any remaining-useful-life issues for this source. The baseline SO_2 emissions are 257 tpy. A summary of the State's SO_2 RP analysis is provided in Table 33 below. The emission rate for each control option in the table is reflective of the 30-day rolling average contained in the State's RP analysis.

TABLE 33—SUMMARY OF CENC BOILER 3 SO_2 RP ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu) (30-day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)
DSI	60	0.11	147	$1,340,661	$9,114
Fuel Switching	100	0.00	245	1,428,911	5,828

The State determined it would take CENC five years after SIP approval to install any controls.

The State used modeling results from CENC Boiler 4 to determine the projected visibility improvement for Boiler 3 because the units are similar and located at the same facility. CALPUFF modeling indicates a 0.08 dv improvement for DSI applied to Boiler 4. DSI controls for Boiler 4 would reduce SO_2 emissions by approximately 268 tons per year. DSI controls for Boiler 3 would reduce SO_2 emissions by about 147 tons per year. Fuel switching to natural gas would reduce SO_2 emissions by an estimated 245 tons annually. The State inferred that either control applied to Boiler 3 would yield visibility improvements of less than 0.10 dv.

The State determined that fuel switching and DSI were not reasonable to select as RP controls due to the high cost effectiveness values and low visibility improvement associated with these controls. Based on a fuel analysis, the State determined that the maximum SO_2 emissions rate from 2000–2010 is 0.99 lb/MMBtu. In establishing an RP emission limit, the State determined a 20% contingency factor is warranted for CENC Boiler 3 due to the different load factors discussed above. Based upon its consideration of the five factors that it used for RP, the State has determined that the SO_2 RP emission limit for CENC Boiler 3 is 1.2 lbs/MMBtu (annual average).

We agree with the State's conclusions, and we are proposing to approve its SO_2 RP determination for CENC Boiler 3.

NO_X RP Determination

The State determined that flue gas recirculation (FGR), SNCR, ROFA, fuel switching to natural gas, and three options for SCR (regenerative SCR (RSCR), high temperature SCR (HTSCR), and low temperature SCR (LTSCR)) were technically feasible for reducing NO_X emissions at CENC Boiler 3. The State determined that LoTOx™, ECO, RRI, and coal reburn plus SNCR were not technically feasible. The State determined that because CENC Boiler 3 is a coal stoker boiler, LNBs are also not technically feasible.

The State did not identify any energy or non-air quality environmental impacts that would preclude the selection of any of the controls evaluated, nor are there any remaining-useful-life issues for this source. A summary of the State's NO_X RP analysis is provided in Table 34 below. Baseline NO_X emissions are 205 tpy. The emission rate for each control option in the table is reflective of the 30-day rolling average contained in the State's RP analysis.

TABLE 34—SUMMARY OF CENC BOILER 3 NO_X RP ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu) (30-day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)
FGR	20	0.17	34	$1,042,941	$30,292
SNCR	30	0.15	51	513,197	10,146
Fuel Switching	35	0.14	84	1,428,911	16,950
ROFA w/Rotamix	57	0.09	77	978,065	9,496
RSCR	75	0.05	96	978,065	10,160
HTSCR	86	0.03	126	1,965,929	15,651
LTSCR	86	0.03	145	2,772,286	19,187

The State estimates that the source would need at least five years after SIP approval to install the control equipment.

The State used modeling results from CENC Boiler 4 to determine the projected visibility improvement for Boiler 3 since the units are similar and located at the same facility. CALPUFF modeling indicates a 0.12 dv improvement for LNB + SOFA + SNCR applied to Boiler 4. LNB + SOFA + SNCR controls for Boiler 4 would reduce NO_X emissions by approximately 368 tons per year. The highest performing SCR controls for Boiler 3 would reduce NO_X emissions by about 145 tons per year. Based on this information, the State has inferred that any control applied to Boiler 3 would yield visibility improvements of less than 0.12 dv. The State determined that none of the evaluated controls were reasonable because of the high cost effectiveness values and low visibility improvement for each of the controls.

Based on a review of historical load characteristics of this boiler, the State determined that RP for Boiler 3 is an annual NO_X limit based on 50% annual capacity utilization using the maximum capacity year in the last decade. Included in this annual capacity utilization, there is a 20% contingency factor for reasons explained above. The State determined that the NO_X RP emission limit for Boiler 3 is 246 tons/year (12-month rolling total).

We agree with the State's conclusions, and we are proposing to approve its NO_X RP determination for CENC Boiler 3.

PM RP Determination

CENC Boiler 3 is equipped with a fabric filter baghouse to control PM emissions with a current emission limit of 0.07 lb/MMBtu. Fabric filter baghouses are the most stringent control technology for controlling PM emissions, and stack tests show that the fabric filter baghouses are achieving a 98% reduction in PM. The State determined that PM RP for Boiler 3 is an emission limit of 0.07 lb/MMBtu.

The State assumes the RP emission limit can be met with the operation of the current fabric filter baghouses.

While we do not agree with all of the State's assumptions and conclusions in arriving at a PM RP limit of 0.07 lb/MMBtu, we are proposing to approve the State's PM RP determination for CENC Boiler 3. Based on our review/analysis, it appears CENC is capable of achieving a lower emission limit than 0.07 lb/MMBtu with existing equipment. However, we anticipate that the visibility improvement that would result from lowering the limit to a value below 0.07 lb/MMBtu would be insignificant. Under these circumstances, we are proposing to find that the State's RP determination was reasonable.

We find that an emission limit of 0.07 lb/MMBtu is reasonable, as a lower emission limit would not result in significant visibility improvement. Thus, we are proposing to approve the State's PM RP determination for CENC Boiler 3.

iii. CSU—Nixon Unit 1

Background

The Nixon facility is located in Fountain, Colorado. This facility consists of one coal fired boiler (Unit 1), an auxiliary boiler, the associated equipment needed for generating electricity, and two natural-gas-fired simple cycle combustion turbines driving electricity generators. The facility also includes the various processes necessary to handle the coal, flyash and bottom ash. The State determined that Unit 1 and the two combustion turbines were subject to RP. The State determined the rest of the units at this facility had emissions below the de minimis thresholds set by the State. The boiler is a 227 MW unit with a pulverized-coal, dry-bottom, front-fired boiler that fires low sulfur western coal as the primary fuel. It can currently use No. 2 distillate oil or natural gas for an ignition fuel. The State's RP determination can be found in Chapter 8.5.2.3 and Appendix D of the SIP. The analysis for the combustion turbines can be found in section V.D.2.b.x of this notice.

SO_2 RP Determination

Nixon Unit 1 is currently uncontrolled for SO_2. The State determined that DSI and dry FGD were technically feasible for reducing SO_2 emissions from Nixon Unit 1. The State did not identify any energy or non-air quality environmental impacts that would preclude the selection of any of the controls evaluated, nor are there any remaining-useful-life issues for this source. A summary of the State's SO_2 RP analysis is provided in Table 35 below. Baseline SO_2 emissions are 4,121 tpy based on the average of 2006–2008 actual emissions. The emission rate for each control option in the table is reflective of the 30-day rolling average contained in the State's RP analysis.

TABLE 35—SUMMARY OF NIXON UNIT 1 SO_2 RP ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu) (30-day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
DSI—Trona	60	0.19	2,473	$9,438,692	$1,997	0.44
Dry FGD	78	0.11	3,215	12,036,604	3,744	0.46
Dry FGD	85	0.08	3,392	13,399,590	3,950	0.50

The State estimates it would take 3–5 years after SIP approval for the source to install controls on Nixon Unit 1.

The State determined that dry FGD was reasonable for RP control for Nixon Unit 1. Based upon its consideration of the five factors that it used for RP, the State determined that the SO_2 RP emission limit for CSU Nixon Unit 1 is 0.11 lb/MMBtu (30-day rolling average). The State assumes that the emission limit can be achieved with dry FGD. The State determined that a lower emissions limit (85% control efficiency) for Unit 1 was not reasonable as increased control costs to achieve such an emissions rate would not provide appreciable incremental improvements in visibility (0.04 delta dv).

We agree with the State's conclusions, and we are proposing to approve its SO_2 RP determination for CSU Nixon Unit 1.

NO_X RP determination

Nixon Unit 1 is currently controlled for NO_X emissions with LNBs. The State determined ULNB, OFA, SNCR, SNCR plus ULNB, and SCR were technically feasible for reducing NO_X emissions at Nixon Unit 1. The State determined ECO, RRI, and coal reburn plus SNCR were not technically feasible.

The State did not identify any energy or non-air quality environmental impacts that would preclude the selection of any of the controls evaluated, nor are there any remaining-useful-life issues for this source. A summary of the State's NO_X RP analysis is provided in Table 36 below. Baseline NO_X emissions are 2,356 tpy based on the average of 2006–2008 actual emissions. The emission rate for each control option in the table is reflective of the 30-day rolling average contained in the State's RP analysis.

TABLE 36—SUMMARY OF NIXON UNIT 1 NO_X RP ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu) (30-day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
ULNBs	20	0.24	471	$567,000	$1,203	0.15
OFA	25	0.22	589	403,000	684	0.15
ULNBs + OFA	30	0.21	707	907,000	1,372	0.16
SNCR	30	0.21	707	3,266,877	4,564	0.16

TABLE 36—SUMMARY OF NIXON UNIT 1 NO_X RP ANALYSIS—Continued

Control technology	Control efficiency (%)	Emission rate (lb/MMBtu) (30-day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
ULNBs + SCR	73	0.08	1,720	11,007,000	6,398	0.24
SCR	73	0.08	1,720	11,010,000	6,400	0.24

The State estimates it would take CSU 2–3 years to install SNCR and 3–4 years to install SCR after SIP approval.

The State determined NO_X RP is ULNBs plus OFA. The State eliminated SNCR, ULNBs plus SCR, and SCR from consideration due to the high cost effectiveness values and low visibility improvement for these controls. Based upon its consideration of the five factors that it used for RP, the State determined that the NO_X RP emission limit for Nixon Unit 1 is 0.21 lb/MMBtu (30-day rolling average). The State assumes that the emission limit can be achieved with ultra-low NO_X burners with overfire air control. The State did not choose SNCR as it would achieve the same emissions reductions at a greater expense.

We agree with the State's conclusions, and we are proposing to approve the State's NO_X RP determination for CSU Nixon Unit 1.

PM RP Determination

Nixon Unit 1 is equipped with fabric filter baghouses to control PM emissions with an emission limit of 0.03 lb/MMBtu. Stack tests show that the fabric filter baghouses are achieving greater than a 95% reduction in PM. The State determined that fabric filter baghouses are the most stringent control technology for controlling PM emissions. The State also evaluated what would constitute the most stringent level of control for PM by looking at recent BACT determinations. Based on this evaluation, the State determined that an emission limit of 0.03 lb/MMBtu represents the most stringent level of control for this type of source. The State did not provide a full four-factor analysis plus visibility improvement modeling because the State determined RP to be the most stringent control technology and limit.

The State has determined that the PM RP emission limit for CSU Nixon Unit 1 is 0.03 lb/MMBtu (30-day rolling average). The State assumes that the emission limit can be achieved through the operation of the existing fabric filter baghouses.

We agree with the State's conclusions, and we are proposing to approve its PM RP determination for CSU Nixon Unit 1.

iv. Black Hills Energy Clark Power Plant, Units 1 and 2

Black Hills/Colorado Electric Utility Company informed the State that the Clark Units 1 and 2 will be shut down by December 31, 2013. The shutdown will result in SO_2, NO_X and PM reductions of approximately 1,457 tpy, 861 tpy, and 72 tpy, respectively. The State determined that the shutdown of Clark Power Plant Units 1 and 2 by December 31, 2013 is RP for this source. The State did not provide a RP analysis for this facility since the shutdown of the facility represents the most stringent control. The State's discussion for the source can be found in Chapter 8.5.2.4 of the SIP. The shutdown of Black Hills Energy Clark Power Plant Unit 1 and Unit 2 is required by the RH SIP (see section 8.5.2 of the SIP and Regulation No. 3, Part F, Section VI.B).

v. Holcim Florence Cement Plant

Background

The Holcim Florence Cement Plant is a Portland cement plant located in Florence, Colorado. In May 2002, a newly constructed cement kiln commenced operation at the plant. This more energy-efficient 5-stage preheater/precalciner kiln replaced three older wet process kilns. The Florence Plant includes a quarry where major raw materials used to produce Portland cement, such as limestone, translime and sandstone, are mined, crushed and then conveyed to the plant site. Emissions from the kiln system, raw mill, coal mill, alkali bypass and clinker cooler are all routed through a common main stack for discharge to the atmosphere. The kiln system is rated at 950 MMBtu per hour of fuel input with a nominal clinker production rate of 5,950 tons per day. It is permitted to burn the following fuel types: Coal, tire derived fuel, petroleum coke, natural gas, dried cellulose, and oil, including non-hazardous used oil. The State determined that the kiln system, quarry, and finish mill were subject to RP and that all other units at this facility fall below the State's de minimis threshold. The quarry and finish mill only have PM emissions. The State RP determination for the Holcim Florence Cement Plant can be found in Chapter 8.5.2.5 and Appendix D of the SIP.

SO_2 RP Determination

The kiln system is currently controlled with a wet FGD with a current SO_2 permit limit of 1006.5 tpy. The wet FGD, in conjunction with good combustion practices and the inherent recycling and scrubbing of acid gases in the manufacturing process, achieves a 98.3% reduction in SO_2 emissions as measured by the total sulfur input into the system versus the amount of sulfur emitted to atmosphere. The State estimates that the wet FGD itself achieves an overall SO_2 removal efficiency of greater than 90%.

On August 9, 2010, EPA finalized changes to the NSPS for Portland Cement Plants. The NSPS requires new, modified, or reconstructed cement kilns to meet an emission standard of 0.4 pound of SO_2 per ton of clinker on a 30-day rolling average or a 90% reduction as measured at the inlet and outlet of the control device. While the new NSPS does not apply to the Holcim Portland Plant because it is an existing facility, the State determined that 90 percent control represents the most stringent level of control and wet FGD the most stringent control technology for Portland cement plants. Therefore, the State did not complete a full RP analysis.

The State did evaluate emissions limit tightening based on current operations. As a part of its submittals to the State, Holcim analyzed continuous hourly emission data for SO_2. The State used the hourly emission data from 2004 to 2008 to calculate the daily emission rates. The State calculated a 30-day rolling average emission rate by dividing the total emissions from the previous 30 operating days by the total clinker production from the previous 30 operating days. The State established two RP limits for the Holcim Florence Cement Plant. The State used the 99th percentile of the 30-day rolling average data to establish a short-term SO_2 RP emission limit of 1.30 pounds per ton of clinker (30-day rolling average). The State calculated the long-term annual

limit by multiplying the long-term baseline SO_2 value of 0.77 lb/ton clinker (the mean of 0.51 pound per ton plus one standard deviation of 0.26 pound per ton) by the annual clinker limit of 1,873,898 tpy, and then dividing by 2,000 pounds per ton. The State determined that the SO_2 RP long-term limit is 721.4 tpy (12-month rolling total). The State assumes that the emission limits can be achieved through the operation of the existing wet FGD.

We agree with the State's conclusions, and we are proposing to approve its SO_2 RP determination for the Holcim Florence Cement Kiln.

NO_X RP Determination

NO_X emissions from the kiln are currently controlled by a number of technologies, including LNBs. The State determined water injection (the injection of water into the main flame of the kiln to act as a heat sink and reduce the flame temperature) and SNCR were technically feasible. The State determined that SCR is not commercially available for Portland cement kilns.

Although we disagree with the State's conclusion on the commercial availability of SCR for cement kilns, we accept the State's decision, for purposes of RH, not to analyze this control technology further. We note that EPA has acknowledged, in the context of establishing NSPS for Portland Cement Plants, substantial uncertainty regarding the cost effectiveness associated with the use of SCR at such plants. See 75 FR 54995. We expect the State to reevaluate this technology in subsequent RP planning periods.

The State did not identify any energy or non-air quality environmental impacts that would preclude the selection of any of the controls evaluated, nor are there any remaining-useful-life issues for this source. A summary of the State's NO_X RP analysis is provided in Table 37 below. Baseline NO_X emissions are 1,931 tpy based on the average of 2007–2009 actual emissions. The emission rate in the table is reflective of the 30-day rolling average contained in the State's RP analysis. The State estimates that water injection would result in a 7 percent or less emission reduction and SCNR could achieve about 45 percent control.[22] Since the State's initial analysis indicated that SNCR would be reasonable for RP control, the State did not analyze water injection further.

TABLE 37—SUMMARY OF HOLCIM FLORENCE CEMENT KILN NO_X RP ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/ton of clinker) (30-day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
SNCR	45	2.73	1098.9	$2,520,000	$2,293	0.29

The State has determined that Holcim will need five years from SIP approval to install SNCR controls.

The State determined that NO_X RP control is SNCR. The State has determined that the NO_X RP emission limits for the Holcim Florence Cement Kiln are 2.73 pounds per ton of clinker (30-day rolling average) and 2086.8 tpy (12-month rolling average). The State assumes that the emission limits can be achieved through the operation of the existing LNBs and the installation and operation of SNCR.

The State calculated the 30-day rolling average short-term limit by adjusting upward by 10% (to account for the use of tire-derived fuel) the short-term baseline emission rate of 4.47 pounds of NO_X per ton clinker, and by then accounting for SNCR at 45% control efficiency [4.47/0.9*(1–0.45) = 2.73]. The State calculated the long-term annual limit by adjusting the annual baseline emission rate of 3.64 lbs/ton clinker (the mean of 3.43 pounds per ton plus one standard deviation of 0.21 pound per ton) in a similar fashion [3.64/0.9*(1–0.45) = 2.23 lb/ton]. The State took the calculated value of 2.23 pounds per ton, multiplied it by the annual clinker limit of 1,873,898 tpy, and then divided by 2,000 pounds per ton to arrive at the 2,086.8 tpy NO_X limit.

We agree with the State's conclusions, and we are proposing to approve its NO_X RP determination for the Holcim Florence Cement Kiln.

PM RP Determination for the Kiln

The kiln system is currently controlled with fabric filter baghouses with an emission limit of 246.3 tpy. The units are exceeding a PM control efficiency of 95%. The State has determined that the existing fabric filter baghouses installed on the kiln system represent the most stringent control technology.

The 246.3 tpy limit equates to an annual average of 0.26 pound of PM per ton of clinker. The State evaluated the impact on visibility of a lower emission rate. The State modeled possible visibility improvements associated with two emission rates: an emission rate of 0.08 pound of PM per ton of clinker (19.83 lbs/hour) and a rate of 0.04 pound of PM per ton of clinker (9.92 lbs/hour). This analysis assumed the emissions were all attributable to the kiln (i.e., no contribution from the clinker cooler) to assess the impact of a possible reduction of the kiln emission limit. The 98th percentile impact for all pollutants is 0.435 dv. The modeling showed no change to this value when the State modeled the lower emission limits. The State's modeling demonstrates that PM is an insignificant contributor to visibility impairment.

Given the very limited impact of PM emissions from the kiln system on visibility impairment, the State determined that no additional PM emissions control is warranted. The State has determined that the PM RP emission limit for the Holcim Florence Cement Kiln is 246.3 tpy of PM (12-month rolling total) from the kiln system main stack (including emissions from the clinker cooler). The State assumes that the emission limit can be achieved through the operation of the existing fabric filter baghouses.

We agree with the State's conclusions, and we are proposing to approve its PM RP determination for the Holcim Florence Cement Kiln.

[22] An SNCR control efficiency of 50% is feasible for the Portland Plant kiln. However, to achieve the necessary system configuration and temperature profile, SNCR will be applied at the top of the preheater tower and thus the alkali bypass exhaust stream cannot be treated. To achieve the proper cement product specifications, the Portland Plant alkali bypass varies from 0–30% of main kiln gas flow. Adjusting by 10%, for the alkali bypass to account for the exhaust gas that is not treated (*i.e.,* bypassed) by the SNCR system, the State determined the overall SNCR control efficiency for the main stack will be 45%.

PM RP Determination for the Quarry[23]

The quarry has a current PM emission limit of 47.9 tpy. The State has determined that the existing fugitive dust control plan and associated control measures represent the most stringent controls for the quarry emission sources. The control measures include: watering and the use of chemical stabilizers, compaction and re-vegetation of stockpiles, vehicle speed limitations, reclamation and sequential extraction of materials, paving, graveling and cleaning of haul roads, sequential blasting, wet drilling, and the suspension of activities during high wind events. The State also determined that additional controls would result in no additional visibility benefit based on the low permitted emissions.

The State has determined that the PM RP emission limit for the Holcim Florence Cement Quarry is 47.9 tpy fugitive PM (12-month rolling total).

We agree with the State's conclusions, and we are proposing to approve its PM RP determination for the Holcim Florence Cement Quarry.

PM RP Determination for the Finish Mill

The finish mill is currently controlled with fabric filter baghouses with an emission limit of 34.3 tpy of PM (12-month rolling total). The units are exceeding a PM control efficiency of 95%. The State determined that the current control technology and limit represent the most stringent level of control for the finish mill. Accordingly, the State did not provide a four-factor analysis plus visibility improvement modeling for the finish mill.

The State has determined that the PM RP emission limit for the Holcim Florence Cement Finish Mill is 34.3 tpy (12-month rolling total). The State assumes that the emission limit can be achieved through the operation of the existing fabric filter baghouses.

We agree with the State's conclusions, and we are proposing to approve its PM RP determination for the Holcim Florence Cement Finish Mill.

vi. Tri-State Generation Nucla Facility

Background

The Tri-State Nucla facility is located in Montrose County approximately 3 miles southeast of the town of Nucla, Colorado. The Nucla facility consists of one coal-fired steam-driven electric generating unit, Unit 4, with a rated electric generating capacity of 110 MW (gross). The Nucla facility is an atmospheric circulating fluidized bed (CFB) unit. Additionally, the facility includes a number of fugitive dust sources. Unit 4 is the only unit subject to RP as the fugitive dust sources fall below the de minimis levels set by the State. The State's RP determination for the Nucla facility can be found in Chapter 8.5.2.6 and Appendix D of the SIP.

SO_2 RP Determination

Unit 4 is currently controlled for SO_2 emissions by limestone injection achieving a 70% reduction in emissions. Unit 4 has a current permit limit of 0.4 lbs/MMBtu (30-day rolling average). The State determined that limestone injection improvements (LII), dry FGD, DSI, and LII with a dry FGD were technically feasible. Study-level information for hydrated ash reinjection (HAR) systems at Nucla or any other EGU in the western United States were not available for use in evaluating costs. Based on the lack of cost information, the State does not consider this option to be commercially available and did not consider HAR in this analysis. The State did not evaluate DSI, as this technology would achieve less than a 50% reduction in emissions, which is less than the current SO_2 controls.

The State did not identify any energy or non-air quality environmental impacts that would preclude the selection of any of the controls evaluated, nor are there any remaining-useful-life issues for this source. A summary of the State's SO_2 RP analysis is provided in Table 38 below. Baseline SO_2 emissions are 1,335 tpy based on the average of 2006–2008 actual emissions. The emission rate for each control option in the table is reflective of the 30-day rolling average contained in the State's RP analysis. Costs for SO_2 control options (and NO_X) were evaluated based on analyses for similar systems proposed at other western CFB boiler units, specifically Spiritwood in North Dakota[24] and Bonanza in Utah.[25] The State did not model visibility improvement due to time constraints.

TABLE 38—SUMMARY OF NUCLA UNIT 4 SO_2 RP ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/mmbtu) (30-day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)
LII	39.4	0.19	526	$914,290	4,161
Dry FGD	87.0	0.04	1,162	7,604,627	6,547
LII + dry FGD	93.9	0.02	1,254	9,793,222	7,808

The State's analysis assumes that the LII will not require any construction or capital improvements and compliance time will be minimal. The State anticipates that the time necessary for installing dry FGD or dry FGD plus LII would be 3–5 years after SIP approval.

The State eliminated dry FGD and dry FGD plus limestone injection improvements from consideration due to the high cost effectiveness values. The State originally asserted in the Nucla RP analysis that limestone injection improvements are technically feasible. However, Tri-State provided additional information on November 29, 2011 in the Colorado Air Quality Control Commission hearing that introduced significant uncertainty regarding the technical feasibility of LII for Unit 4 at Nucla Station. The State determined upon further evaluation that LII beyond current operations were not feasible in all operating conditions.

Based upon its consideration of the four factors, the State has determined that the SO_2 RP emission limit for Nucla Unit 4 is 0.5 lb/MMBtu (30-day rolling average). The State assumes that the emission limit can be achieved through the operation of the current limestone injection system.

[23] The summary of the RP analysis was not included in the SIP. Please see the State's full RP analysis for information on the quarry and finish mill.

[24] Barr, July 2007. ''Application for a Permit to Construct a Combined Heat and Power (CHP) Plant.'' Prepared for Great River Energy—Spiritwood Station, Spiritwood, ND.

[25] EPA, August 30, 2007. ''Deseret Power Electric Cooperative, Bonanza Power Plant, Waste Coal Fired Unit: Prevention of Significant Deterioration Permit to Construct—Final Statement of Basis for Permit No. PSD–00–0002.01.00. ''

We agree with the State's conclusions, and we are proposing to approve the State's SO_2 RP determination for Nucla Unit 4.

NO_X RP Determination

In 2006, Tri-State installed a small-scale SNCR system on Unit 4 that injects anhydrous ammonia to achieve NO_X reductions. Tri-State does not operate the SNCR system frequently. It is used on occasions when NO_X emissions approach 0.4 lb/MMBtu. Operation above this level at high unit capacity factors results in levels that approach the annual NO_X limit of 1,987.9 tpy (12-month rolling average).

The State determined full-scale SNCR and SCR were technically feasible for reducing NO_X emissions at Nucla Unit 4. Though the SIP states SCR is not technically feasible on a CFB coal-fired boiler, the State's RP analysis contains a discussion on SCR being technically feasible, and we agree with the State's assessment in the RP analysis. With respect to SNCR, the State has asserted that there is substantial uncertainty surrounding the potential control efficiency achievable by a full-scale SNCR system at a CFB boiler burning western coal. The State's estimates for control efficiency vary between 10–40% for NO_X reduction potential.

The State determined that the costs for SCR would likely be excessive, and the State did not further evaluate this control option. The State estimated that the incremental cost of using SCR versus SNCR on a CFB Boiler as $25,315 per ton per the Spiritwood BACT analysis and $40,297 per ton per the Bonanza BACT analysis. The State expects a SCR system at the Nucla Station to have even higher costs due to the retrofit factor and small size of Unit 4.

The State did not identify any energy or non-air quality environmental impacts that would preclude the selection of the remaining control evaluated, nor are there any remaining-useful-life issues for this source. A summary of the State's NO_X RP analysis is provided in Table 39 below. Baseline NO_X emissions are 1,760 tpy based on the average of 2006–2008 actual emissions. The emission rate for each control option in the table is reflective of the 30-day rolling average contained in the State's RP analysis. The State did not model visibility improvement due to time constraints. The State evaluated SNCR at two different control efficiencies due to the uncertainty of SNCR control on this type of boiler.

TABLE 39—SUMMARY OF NUCLA UNIT 4 NO_X RP ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/mmbtu) (30–day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)
SNCR	10.3	0.40	173	$2,238,592	12,974
SNCR	43.6	0.25	730	2,238,592	3,065

The State anticipates that the time necessary to install and operate SNCR would be approximately 3–5 years after SIP approval.

Based on its consideration of the four factors, the State has determined that NO_X RP for Nucla Unit 4 is the following NO_X emission limit: 0.5 lb/MMBtu (30-day rolling average). Due to the uncertainty of the control efficiency of SNCR control, the State determined that it was not reasonable for NO_X RP control at this time.

We agree with the State's conclusions, and we are proposing to approve its NO_X RP determination for Tri-State Nucla Unit 4.

PM RP Determination

Nucla Unit 4 is equipped with fabric filter baghouses to control PM emissions with an emission limit of 0.03 lb/MMBtu. Stack tests show that the fabric filter baghouses are achieving a 99.9% reduction in PM. The State determined that fabric filter baghouses are the most stringent control technology for controlling PM emissions. The State also evaluated what would constitute the most stringent level of control for PM by looking at recent BACT determinations. Based on this evaluation, the State determined that an emission limit of 0.03 lb/MMBtu represents the most stringent level of control for this type of source. The State did not provide a full four-factor analysis because the State determined RP to be the most stringent control technology and limit.

The State has determined that the PM RP emission limit for Tri-State Nucla Unit 4 is 0.03 lb/MMBtu (30-day rolling average). The State assumes that the emission limit can be achieved through the operation of the existing fabric filter baghouses.

We agree with the State's conclusions, and we are proposing to approve its PM RP determination for Tri-State Nucla Unit 4.

vii. Tri-State Craig Unit 3

Background

The Tri-State Craig Station is located in Moffat County about 2.5 miles southwest of the town of Craig, Colorado. This facility is a three unit coal-fired power plant with a total net electric generating capacity of 1264 MW. Craig Units 1 and 2 are subject to BART. The State determined Craig Unit 3 was subject to RP. Craig Unit 3 is a dry-bottom pulverized coal-fired boiler. The Craig facility also includes two cooling towers, coal handling systems, ash handling systems, limestone handling system, and the staging/landfill area. In addition to Craig Unit 3, the State determined that the ash handling system and the limestone hauling system were subject to RP (they only emit PM emissions, not SO_2 or NO_X). The State determined the other systems were not subject to RP as their emissions were below the de minimis threshold set by the State. The State's RP determination can be found in Chapter 8.5.2.7 and Appendix D of the SIP.

SO_2 RP Determination

Craig Unit 3 is currently controlled with a dry FGD currently achieving over 80 percent SO_2 reduction. The current emission limits are .20 lb/MMBtu (calendar day average), 80% reduction (30-day rolling average). As mentioned earlier, if a BART source has current SO_2 controls achieving at least a 50% reduction in emissions, the state needs to evaluate upgrades to the existing control technology but does not need to consider the replacement of that technology (70 FR 39171). We conclude that it is reasonable to follow this approach for evaluating potential RP controls in this initial planning period. Colorado should consider replacement of existing scrubbers in future planning periods. The State considered the following dry FGD upgrades: (1) Use of performance additives; (2) use of more reactive sorbent or increasing the pulverization level of sorbent; (3)

engineering redesign of atomizer or slurry injection system. Based on the design of Unit 3, the State could not identify any performance additives that could be used and determined that Tri-State cannot use a more reactive sorbent or increase the pulverization level of sorbent. The source recently redesigned the slurry injection system, and the State could not identify any other feasible upgrades. Based on its analysis, the State determined that no upgrades are technically feasible. We agree with the State's assessment of possible upgrades. The State determined that fuel switching and DSI were technically feasible, but did not further analyze these controls as they would achieve less emission reductions than the current controls.

The State analyzed emission limit tightening based on current operations. Tri-State made upgrades to the dry FGD between 2007 and 2009. The maximum 30-day rolling emission rate post-upgrade (June 2009–June 2010) was 0.14 lbs/MMBtu and the average 30-day rolling average was 0.11 lbs/MMBtu. The State modeled the visibility improvement that would result from a 0.15 lbs/MMBtu emission limit and 0.07 lbs/MMBtu emission limit. The visibility improvement was 0.26 dv and 0.38 dv, respectively.

Based on its analysis, the State determined that a more stringent 30-day rolling SO_2 limit of 0.15 lbs/MMBtu represents an appropriate and reasonable level of emissions control for this dry FGD control technology. Upon review of 2009 emissions data from EPA's CAMD Web site, the State has determined that this emissions rate is achievable without additional capital investment. The State has determined that the SO_2 RP emission limit for Craig Unit 3 is 0.15 lb/MMBtu (30-day rolling average). The State assumes the emission limit is achievable with the current dry FGD controls.

The State has determined that a SO_2 limit lower than 0.15 lbs/MMBtu would not result in significant visibility improvement (0.12 dv), would likely result in frequent non-compliance events, and, would, thus, not be reasonable.

We agree with the State's conclusions, and we are proposing to approve its SO_2 RP determination for Tri-State Craig Unit 3.

NO_X RP Determination

Craig Unit 3 is currently controlled with LNBs and OFA that were installed in 2009. The State determined that combustion control refinements, neural network system (NNS) combustion controls, SNCR, and SCR were technically feasible. The State determined that ROFA, ECO, RRI, and coal reburn plus SNCR were not technically feasible.

The State did not identify any energy or non-air quality environmental impacts that would preclude the selection of any of the controls evaluated, nor are there any remaining-useful-life issues for this source. A summary of the State's NO_X RP analysis is provided in Table 40 below. Baseline NO_X emissions are 6,402 tpy based on the average of 2006–2008 actual emissions. The emission rate for each control option in the table is reflective of the 30-day rolling average contained in the State's RP analysis. The State did not model combustion control refinements or NNS because of the extremely low control efficiency for these two control options.

TABLE 40—SUMMARY OF TRI-STATE CRAIG UNIT 3 NO_X RP ANALYSIS

Control technology	Control efficiency (%)	Emission rate (lb/mmbtu) (30–day rolling average)	Emission reduction (tpy)	Annualized costs	Cost effectiveness ($/ton)	Visibility improvement (delta dv for the maximum 98th percentile impact)
Combustion Control Refinements	2	0.32	114	$122,000	$1,071	.....
NNS	5	0.31	285	280,000	984	.....
SNCR	15	0.28	858	4,173,000	4,887	0.32
SCR	75	0.08	4,281	239,762,387	6,952	0.79

The State eliminated SCR from consideration due to the high cost effectiveness value and the visibility improvement associated with this control. The State determined SNCR was reasonable for RP control. Based upon its consideration of the five factors that it used for RP, the State has determined that the NO_X RP emission limit for Craig Unit 3 is 0.28 lb/MMBtu (30-day rolling average). The State assumes that the RP emission limit can be achieved through the operation of SNCR.

We agree with the State's conclusions, and we are proposing to approve its NO_X RP determination for Tri-State Craig Unit 3.

PM RP Determination

Craig Unit 3 is equipped with fabric filter baghouses to control PM emissions with an emission limit of 0.013 lb/MMBtu for PM filterable and 0.012 lb/MMBtu for PM_{10}. Stack tests show that the fabric filter baghouses are achieving over a 95% reduction in PM. The State determined that fabric filter baghouses are the most stringent control technology for controlling PM emissions. The State also evaluated what would constitute the most stringent level of control for PM by looking at recent BACT determinations. Based on this evaluation, the State determined that the current emission limits represents the most stringent level of control for this type of source. The State did not provide a full four-factor analysis plus visibility improvement modeling because the State determined RP to be the most stringent control technology and limit.

The State has determined that the PM RP emission limits for Tri-State Craig Unit 3 are 0.013 lb/MMBtu for filterable PM (30-day rolling average) and 0.012 lb/MMBtu for PM_{10} (30-day rolling average). The State assumes that the emission limits can be achieved through the operation of the existing fabric filter baghouses.

We agree with the State's conclusions, and we are proposing to approve its PM RP determination for Tri-State Craig Unit 3.

viii. PSCO Cameo Station

PSCO informed the State that the Cameo Station east of Grand Junction, Colorado would be shut down by December 31, 2011, resulting in SO_2, NO_X, and PM reductions of approximately 2,618, 1,140, and 225 tons per year, respectively. The State did not perform a RP analysis for this source since a shutdown is the most stringent control. The State determined that the shutdown of Cameo Station by

December 31, 2011 is RP for this source. We agree with the State's conclusions, and we are proposing to approve its RP determination for PSCO Cameo Station. The State's discussion of RP for Cameo Station can be found in Chapter 8.5.2.8 of the SIP. The shutdown of PSCO Cameo Station is required by the RH SIP (see Chapter 8.5.2 of the SIP and Regulation No. 3, Part F, Section VI.B).[26]

Summary of State's RP Determinations

TABLE 41—SUMMARY OF THE STATE'S RP DETERMINATIONS FOR STATIONARY SOURCES

Emission unit	Assumed NO_X control type	NO_X Emission limit	Assumed SO_2 control type	SO_2 Emission limit	Assumed particulate control and emission limit
Rawhide Unit 101	Enhanced Combustion Control*.	0.145 lb/MMBtu (30-day rolling average).	Lime Spray Dryer*	0.11 lb/MMBtu (30-day rolling average).	Fabric Filter Baghouse* 0.03 lb/MMBtu.
CENC Unit 3	No Control	246 tons per year (12-month rolling total).	No Control	1.2 lbs/MMBtu	Fabric Filter Baghouse* 0.07 lb/MMBtu.
Nixon Unit 1	ULNBS with OFA	0.21 lb/MMBtu (30-day rolling average).	Lime Spray Dryer	0.11 lb/MMBtu (30-day rolling average).	Fabric Filter Baghouse* 0.03 lb/MMBtu.
Clark Units 1 &2	Shutdown by 12/31/2013.	0	Shutdown by 12/31/2013.	0	Shutdown by 12/31/2013.
Holcim—Florence Kiln	SNCR	2.73 lbs/ton clinker (30-day rolling average). 2,086.8 tons/year	Wet Lime Scrubber*	1.30 lbs/ton clinker (30-day rolling average). 721.4 tons/year	Fabric Filter Baghouse* 246.3 tons/year.
Nucla	No Control	0.5 lb/MMBtu (30-day rolling average).	Limestone Injection*	0.4 lb/MMBtu (30-day rolling average).	Fabric Filter Baghouse* 0.03 lb/MMBtu.
Craig Unit 3	SNCR	0.28 lb/MMBtu (30-day rolling average).	Lime Spray Dryer*	0.15 lb/MMBtu (30-day rolling average).	Fabric Filter Baghouse* 0.013 lb/MMBtu filterable PM 0.012 lb/MMBtu PM_{10}.
Cameo	Shutdown by 12/31/2011.	0	Shutdown by 12/31/2011.	0	Shutdown by 12/31/2011.

*Controls already operating.

ix. Area Oil and Gas Sources

Because the area source oil and gas category is made up of numerous smaller sources, the State determined it is only practical to evaluate the category for RP control as a whole. When reviewing oil and gas area sources, the State identified heater-treaters and RICE as the largest NO_X emission sources.

a. Oil and Gas Heater-Treaters

A heater-treater is a device used to remove contaminants from the natural gas or oil at or near the wellhead before the gas is sent down the production line to a natural gas processing plant or the oil is collected in storage tanks. The latest 2018 emissions inventory for the State assumes approximately 23,000 tons of NO_X per year from 26,000 natural gas and oil heater-treaters. This equates to approximately 0.88 tpy of NO_X per gas/oil well heater-treater.

The State's research shows that emission controls and control applications for this source category are not well developed and have focused primarily on methane reductions. Though the State identified some technically feasible control options, the State determined that the costs of compliance and the control effectiveness could not be confidently determined. Because of the uncertainty of controls, the State has determined that additional controls under RP are not reasonable in this initial planning period.

b. RICE

Background

Power generated by large RICE is generally used to compress natural gas or to generate electricity in remote locations. The designation large RICE refers to engines have a rating of at least 100 horsepower (hp) for the purpose of this RP analysis. Large RICE produce power by combustion of fuel and are operated at various air-to-fuel ratios. RICE are operated with either fuel-rich ratios, which are called rich-burn (RB) engines, or air-rich ratios, which are called lean-burn (LB) engines. The State's 2018 emission inventory shows that large RICE represent 16% of the Statewide point source NO_X emission inventory, with 2018 emissions expected to be 16,199 tpy.

The State determined the following were technically feasible for controlling NO_X emissions from RICE: (1) Air/fuel ratio adjustment for LB engines; (2) ignition/spark timing retard for LB engines; (3) 3-way non-selective catalytic reduction (NSCR) for RB engines; (4) SNCR for RB and LB engines; (5) SCR for LB engines; and 6) replace RICE with electric motors for LB and RB engines.

A summary of the State's RP analysis for RICE engines is provided in Table 42 below. Because control effectiveness and cost effectiveness is dependent on a number of engine-specific factors, the State has provided a range for these factors. Due to a lack of available information, the State did not provide the cost effectiveness for SNCR.

[26] PSCO Cameo Station was shut down in December 2010.

TABLE 42—SUMMARY OF RICE CONTROLS FOR RP

Control technology	Control effectiveness (%)	Cost effectiveness ($/ton)
Lean Burn (Air/Fuel Ratio Adjustment)	5–30	$320–8,300.
Lean Burn (Ignition/Spark Timing Retard)	20	$310–2,000.
Rich Burn NSCR w/an air to fuel ratio (ATF) controller	80–90	$571.
Rich/Lean Burn SNCR	50–95	
Lean Burn SCR	80–90	$430–4,900.
Replace RICE with electric motors	60–100	4,700 or more.

For RICE NO_X control under the RHR, the State determined that the installation of NSCR plus ATF controllers on all RB RICE greater than 500 hp throughout the State satisfies RP requirements. Additional NO_X control for lean burn RICE throughout the State is not reasonable for this planning period. For existing RICE less than 500 hp, the State determined that no additional control is necessary for RP in this planning period. Colorado's emission inventory indicates that in the 2007–2008 timeframe, there were 538 engines with less than 500 hp in the State, and these engines emitted 5,464 tpy of NO_X. At an average of about 10 tons of NO_X emissions per year, the State determined controlling engines of this size is not reasonable.

In addition, for new and modified RICE of 100 hp or greater, the State is relying on emissions controls that are required by EPA's NSPS subpart JJJJ, 40 CFR part 60, and EPA's NESHAP subpart ZZZZ, 40 CFR part 63. The State determined that these federal control requirements satisfy RP for these sources in this planning period.

Colorado adopted regulations to control NO_X emissions from RICE in 2004. For the Denver metro area/North Front Range ozone control area, the State revised Regulation No. 7 to require the installation of controls on new and existing rich burn RICE larger than 500 hp by May 1, 2005. EPA approved the revisions to Regulation No. 7 as part of the Colorado SIP on August 19, 2005 (70 FR 48652).

In December 2008, Colorado adopted section XVII.E.3.a into Regulation No. 7. Section XVII.E.3.a applies to all existing RB RICE over 500 hp throughout the State. The revisions to Regulation No. 7 required that by July 1, 2010 all existing RB RICE over 500 hp in Colorado had to install NSCR with an ATF controller. Sources subject to emission controls under a MACT, BACT, or NSPS are not subject to the requirements of section XVII.E.3.a. In addition, sources that fall below State permitting thresholds are not subject to the requirements of section XVII.E.3.a. An exemption from control for RB RICE can be obtained upon demonstration that the cost of emission control would exceed $5,000 per ton. The State has included Regulation No. 7, section XVII.E.3.a, as part of the RH SIP to become federally enforceable upon EPA approval.

We are proposing to approve the State's RP determination for RICE engines. We are also proposing to approve Regulation No. 7, section XVII.E.3.a, as part of the SIP.

x. Combustion Turbines

Combustion turbines fueled by natural gas are either co-located with coal-fired electric generating units or are stand-alone facilities. These units are primarily used to supplement power supply during peak demand periods when electricity use is highest. Typical emissions for this source type may be significant for NO_X, but usually have very low SO_2 and PM_{10} emissions.

The State evaluated combustion turbines that are co-located at subject-to-BART or subject-to-RP sources. The State determined there are five BART and RP facilities with combustion turbines: PSCO Valmont Generating Station, PSCO Arapahoe Generating Station, CSU—Nixon Power Plant, PRPA Rawhide Energy Station, and PSCO Pawnee Generating Station. Of these, only two turbines located at the Nixon Front Range Power Plant (Turbine #1 and Turbine #2) emit levels of pollutants above the State de minimis levels for NO_X. Baseline NO_X emissions based on the average of 2006–2008 actual emissions are 159.6 tpy for Turbine #1 and 148 tpy for Turbine #2.

The combustion turbines at the Nixon Front Range Power Plant were installed with advanced dry-low-NO_X combustion systems, which are achieving a control efficiency of 89.4% on Turbine #1 and 90.1% on Turbine #2. The State determined that the following were technically feasible controls for NO_X: 1) dry controls using advanced combustor design to suppress NO_X formation and/or promote CO burnout (already installed); and (2) post-combustion controls (SNCR, SCR). Although post-combustions controls are technically feasible, the State's search of the EPA's RACT/BACT/LAER Clearinghouse database revealed SCR is the predominant post-combustion control technology for combustion turbines and did not find any examples of SNCR post-combustion technology applied to combustion turbines. The State could not find any instances of commercial scale SNCR applied at combustion turbines, so the State eliminated SNCR.

The State analyzed SCR for RP control. The State determined that applying SCR at a 90% control efficiency to both turbines would result in about 275 tons of NO_X reduced annually with a capital expenditure of at least $15 million. The State estimated that SCR for these turbines would range from approximately $57,000–$62,000 per ton of NO_X reduced annually. Based on the cost effectiveness value, the State determined that SCR was not reasonable for RP control. Combustion turbines are subject to 40 CFR part 60, subpart GG—Standards of Performance for Stationary Gas Turbines, which limits nitrogen oxides to 117.8 percent by volume at 15 percent oxygen on a dry basis (60.332(a)(1)), supported by monitoring and testing. The State determined that the limits of 40 CFR part 60, subpart GG are NO_X RP for combustion turbines.

We agree with the State's analysis and are proposing to approve its RP determination for combustion turbines and for the CSU—Nixon Power Plant Turbine #1 and Turbine #2.

3. Reasonable Progress Goals

40 CFR 51.308(d)(1) requires states to ''establish goals (in dvs) that provide for RP towards achieving natural visibility conditions'' for each Class I area of the State. These RP goals are interim goals that must provide for incremental visibility improvement for the most impaired visibility days, and ensure no degradation for the least impaired visibility days. The RP goals for the first planning period are goals for the year 2018. The State's discussion of RP and RPGs can be found in Chapter 8 and section 9.5 of the SIP.

Colorado is relying on the WRAP's CMAQ regional modeling performed in 2009 to establish its RP goals for 2018. As part of the 2009 CMAQ modeling, WRAP included all western states' reasonably foreseeable control measures in the projections of 2018 visibility levels.

The Regional Modeling Center at the University of California Riverside, under the oversight of the WRAP Modeling Forum, performed modeling used for the RH long-term strategy for the WRAP member states, including Colorado. The modeling analysis is a complex technical evaluation that began with selection of the modeling system. The Regional Modeling Center primarily used the CMAQ photochemical grid model to estimate 2018 visibility conditions in Colorado and all western Class I areas, based on application of the RH strategies in the various state plans, including assumed controls on BART sources.

The Regional Modeling Center developed air quality modeling inputs, including annual meteorology and emissions inventories for: (1) A 2002 actual emissions base case; (2) a planning case to represent the 2000–2004 RH baseline period using averages for key emissions categories; and (3) a 2018 base case of projected emissions determined using factors known at the end of 2005. Each of these inventories underwent a number of revisions throughout the development process to arrive at the final versions used in CMAQ modeling. The WRAP states' modeling was developed in accordance with our guidance.[27] A more detailed description of the CMAQ modeling performed for the WRAP can be found in the Colorado Class I area TSDs.

The photochemical modeling of RH for the WRAP states for 2002 and 2018 was conducted on the 36-km resolution national regional planning organization domain that covered the continental United States, portions of Canada and Mexico, and portions of the Atlantic and Pacific Oceans along the east and west coasts. The Regional Modeling Center examined the model performance of the regional modeling for the areas of interest before determining whether the CMAQ model results were suitable for use in the RH assessment of the long-term strategy and for use in the modeling assessment. The 2002 modeling efforts were used to evaluate air quality/visibility modeling for a historical episode, in this case, for calendar year 2002, to demonstrate the suitability of the modeling systems for subsequent planning, sensitivity, and emissions control strategy modeling. Model performance evaluation compares output from model simulations with ambient air quality data for the same time period to determine whether model performance is sufficiently accurate to justify using the model to simulate future conditions.

Once the Regional Modeling Center determined that model performance was acceptable, it used the model to determine the 2018 RP goals using the current and future year air quality modeling predictions, and compared the RP goals to the uniform rate of progress.

The State determined that the WRAP 2018 projections represent significant visibility improvement and RP toward natural visibility based upon the State's consideration of the factors required for BART and RP. The State is adopting the WRAPs 2018 projections as its RPG for each Class I area in Colorado. Table 43 shows the URP and the 2018 RPG adopted by the State for such areas.

TABLE 43—COLORADO'S URP AND RP GOAL FOR 2018

Colorado class I areas	20% Worst days				20% Best days	
	2000–2004 Baseline (dv)	2018 URP (dv)	Reduction needed to reach URP goal (delta dv)	2018 CMAQ Modeling projection—state's RP goal	2000–2004 Baseline (dv)	2018 CMAQ Modeling projection
Great Sand Dunes National Park and Preserve	12.78	11.35	1.43	12.20	4.5	4.16
Mesa Verde National Park	13.03	11.58	1.45	12.5	4.32	4.10
Mount Zirkel & Rawah Wilderness Area	10.52	9.48	1.04	9.91	1.61	1.29
Rocky Mountain National Park	13.83	12.27	1.56	12.83	2.29	2.06
Weminuche Wilderness, Black Canyon of Gunnison, and La Garita Wilderness	10.33	9.37	0.96	9.83	3.11	2.93
Eagles Nest Wilderness, Flat Tops Wilderness, Maroon Bells-Snowmass Wilderness, and West Elk Wilderness	9.61	8.78	0.83	8.98	0.70	0.53

Table 43 shows that the State's RH SIP will provide for improvement in visibility for the most-impaired days over the period ending in 2018 and will allow for no degradation in visibility for the least-impaired days.

Table 43 also shows that Colorado is not meeting the URP to meet natural visibility conditions by 2064 because the projected 2018 RPG is greater than the 2018 URP. The State finds that the RPGs established in this SIP are reasonable for this planning period and that achieving the URP in this planning period is not reasonable. Pursuant to 40 CFR 51.308(d)(1)(ii), the State has determined and presented detailed analyses to show why certain controls for specified RP sources are reasonable, and why additional controls during this planning period are not reasonable based upon its consideration of the required factors for RP (40 CFR 51.308(d)(1)(i)(A)). The State has determined and presented detailed analyses to show why certain controls for specified BART sources are reasonable based upon its consideration of the five-factors (40 CFR 51.308(e)(1)(A)). In addition, sources outside of the modeling domain are the single largest contributor to sulfate or nitrate at many Class I areas (see Table 29 in section V.D.1 of this notice). These sources are not under the control of Colorado or the surrounding States, and

[27] Guidance on the Use of Models and Other Analyses for Demonstrating Attainment of Air Quality Goals for Ozone, $PM_{2.5}$, and Regional Haze, (EPA–454/B–07–002), April 2007, located at *http://www.epa.gov/scram001/guidance/guide/final-03-pm-rh-guidance.pdf*. Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations, August 2005, updated November 2005 (''our Modeling Guidance''), located at *http://www.epa.gov/ttnchie1/eidocs/eiguid/index.html,* EPA–454/R–05–001.

will not be significantly controlled by 2018. As discussed below, the State consulted with other states on RP.

Since the State is not meeting the URP, the State is required by 40 CFR 51.308(d)(1)(ii) to assess the number of years it would take to reach natural conditions if visibility improvement continues at the current rate of progress. The State has calculated the year and the length of time to reach natural visibility as follows: Great Sand Dunes: 2152 (148 years); Mesa Verde: 2168 (164 years); Zirkel and Rawah: 2106 (102 years); Rocky Mountain: 2098 (94 years); Black Canyon, Weminuche, and La Garita: 2119 (115 years); and Eagles Nest, Flat Tops, Maroon Bells and West Elk: 2083 (79 years).

We note that the WRAP 2018 reasonable progress projections did not reflect the additional RH controls that Colorado adopted in 2010. These controls included additional BART requirements, the PSCO BART alternative, and RP limits as described above. These additional controls will produce about 44,500 tpy of NO_X and SO_2 reductions that were not included in the WRAP CMAQ modeling. Thus, it is likely that the State is closer to the URP than is indicated by the WRAP modeling.

EPA has evaluated Colorado's demonstrations concerning the RPGs and finds that they provide for reasonable progress towards natural visibility conditions for the first planning period. Based on the RP factors, Colorado has demonstrated that it is not reasonable to attain the URPs for Colorado's Class I areas in the first planning period, and that Colorado's RPGs (as augmented by the additional measures that Colorado adopted in 2010) are reasonable. Colorado has adopted BART, BART alternative, and RP controls that will achieve substantial reductions of NO_X and SO_2 emissions by 2018. We find that Colorado, considering the statutory BART and RP factors, has reasonably evaluated and rejected more stringent controls in this first planning period. We also find that Colorado has focused on an appropriate set of sources and source categories in considering potential reasonable progress controls in this first planning period. Finally, we agree that sources outside of the modeling domain are the single largest contributor to sulfate or nitrate at many Class I areas, that these sources are not under the control of Colorado or the surrounding states, and that they will not be significantly controlled by 2018. This is another major reason that it is not reasonable for the Class I areas in Colorado to attain the URPs in 2018. For these reasons, EPA is proposing that the State's RPGs are reasonable.

E. Long Term Strategy

1. Emission Inventories

40 CFR 51.308(d)(3)(iii) requires that Colorado document the technical basis, including modeling, monitoring, and emissions information, on which it relied to determine its apportionment of emission reduction obligations necessary for achieving RP in each mandatory Class I Federal area it affects. Colorado must identify the baseline emissions inventory on which its strategies are based. 40 CFR 51.308(d)(3)(iv) requires that Colorado identify all anthropogenic (human-caused) sources of visibility impairment it considered in developing its long-term strategy. This includes major and minor stationary sources, mobile sources, and area sources.

In order to meet these requirements, Colorado relied on the emission inventory developed by the WRAP. The pollutants inventoried by the WRAP that Colorado used for this SIP include SO_2, NO_X, VOC, OC, EC, $PM_{2.5}$, PM_{10}, and ammonia. WRAP developed an inventory for the baseline year 2002 and provided projections of future emissions in 2018 based on expected controls, growth, or other factors. The emission inventories developed by the WRAP were calculated using best available data and approved EPA methods.[28]

There are a number of emission inventory source categories identified in the Colorado SIP: point, area, on-road mobile, off-road mobile, anthropogenic fire, natural fire, road dust, fugitive dust, area source oil and gas, and biogenic emissions. The State provided the 2002 baseline, the 2018 projected emissions, and the net change of emissions between 2002 and 2018 for SO_2, NO_X, VOC, OC, EC, $PM_{2.5}$, PM_{10}, and ammonia for each of the above source categories. Following is a summary of the emission inventory for each pollutant by source.

SO_2

Sulfur dioxide emissions come primarily from coal combustion at EGUs but smaller amounts come from natural gas combustion, mobile sources and wood combustion.

TABLE 44—COLORADO SO_2 EMISSIONS—2002 AND 2018

Source category	Baseline 2002	Future 2018	Percent change
Point	97,984	44,062	−55
Area	6,533	7,644	17
On-Road Mobile	4,389	677	−85
Off-Road Mobile	3,015	754	−75
WRAP Area O & G	118	11	−91
Road Dust	4	6	34
Fugitive Dust	6	5	−13
Anthropogenic Fire	108	91	−15
Natural Fire	3,335	3,335	0
Biogenic	.....	.....	.....
Total	115,492	56,585	−51

Overall, SO_2 emission source categories are expected to decline statewide by 51% by 2018. Area sources is the only source category expected to increase by 2018 (we are discounting the 2 tpy increase in road-dust). Increases in area source emissions are linked to population growth.

[28] The methods WRAP used to develop these emission inventories are described in more detail in *Technical Support Document for Technical Products Prepared by the Western Regional Air Partnership (WRAP) in Support of Western Regional Haze Plans;* February 28, 2011. This document is included in the Supporting and Related Materials section of the docket.

NO_X

NO_X emissions in Colorado come mostly from point sources and from on-road and off-road mobile sources.

TABLE 45—COLORADO NO_X EMISSIONS—2002 AND 2018

Source category	Baseline 2002	Future 2018	Percent change
Point	118,667	101,818	−14
Area	11,729	16,360	39
On-Road Mobile	141,883	45,249	−68
Off-Road Mobile	62,448	37,916	−39
WRAP Area O & G	23,518	33,517	43
Road Dust	1	1	0
Fugitive Dust	16	14	−13
Anthropogenic Fire	520	408	−21
Natural Fire	9,377	9,377	0
Biogenic	37,349	37,349	0
Total	405,507	282,010	−30

Overall, NO_X emissions in Colorado are expected to decline by 30% by 2018. Area source and oil and gas emissions are the only source categories expected to increase. Area source emissions increases are related to population growth, and increases in oil and gas emissions are attributable to increased oil and gas development.

VOCs

VOCs come from such sources as automobiles, industrial and commercial facilities, solvent use, and refueling automobiles. Substantial natural emissions of VOCs come from vegetation.

TABLE 46—COLORADO VOC EMISSIONS—2002 AND 2018

Source category	Baseline 2002	Future 2018	Percent change
Point	91,750	77,312	−16
Area	99,191	136,032	37
On-Road Mobile	100,860	41,489	−59
Off-Road Mobile	38,401	24,684	−36
WRAP Area O & G	27,259	43,639	60
Road Dust	.....	.....	.....
Fugitive Dust	.....	.....	.....
Anthropogenic Fire	915	666	−27
Natural Fire	20,404	20,404	0
Biogenic	804,777	804,777	0
Total	1,183,557	1,149,002	−3

Overall, VOC emissions are projected to decrease by 3% statewide, with a 37% increase in area source emissions and a 60% increase in oil and gas emissions. Area source emission increases are a result of increased population growth, and increases in oil and gas emissions are attributable to increased oil and gas development.

OC

OC are emitted directly from the combustion of organic material. A wide variety of sources contribute emissions to this pollutant, including diesel emissions and combustion byproducts from wood and agricultural burning.

TABLE 47—COLORADO OC EMISSIONS—2002 AND 2018

Source category	Baseline 2002	Future 2018	Percent change
Point	17	3	−83
Area	8,432	8,738	4
On-Road Mobile	1,280	1,288	1
Off-Road Mobile	1,286	843	−34
WRAP Area O & G	.....	.....	.....
Road Dust	102	135	33
Fugitive Dust	777	677	−13
Anthropogenic Fire	850	621	−27
Natural Fire	30,581	30,581	0

TABLE 47—COLORADO OC EMISSIONS—2002 AND 2018—Continued

Source category	Baseline 2002	Future 2018	Percent change
Biogenic	.....	.....	.....
Total	43,325	42,886	−1

Overall, OC emissions decrease by 1% in 2018. The main source category expected to increase by 2018 is road dust. The increase in road dust is associated with increases in population and more vehicle miles traveled.

EC

Elemental carbon, also known as soot, is a byproduct of incomplete combustion. Emissions and reductions in this category are dominated by mobile sources. Expected new federal emission standards for mobile sources, especially for diesel engines, along with fleet replacement, are the reasons for the reductions.

TABLE 48—COLORADO EC EMISSIONS—2002 AND 2018

Source category	Baseline 2002	Future 2018	Percent change
Point	.....	.....	.....
Area	1,264	1,325	5
On-Road Mobile	1,448	408	−72
Off-Road Mobile	3,175	1,344	−58
WRAP Area O & G	.....	.....	.....
Road Dust	9	11	33
Fugitive Dust	53	46	−13
Anthropogenic Fire	92	74	−20
Natural Fire	6,337	6,337	0
Biogenic	.....	.....	.....
Total	12,377	9,545	−23

Overall, this category is expected to decline by 23%, with on-road and off-road mobile sources expected to decline by 72% and 58%, respectively. The main source category expected to increase by 2018 is road dust. The increase in road dust is associated with increases in population and more vehicle miles traveled.

$PM_{2.5}$

Fine soil emissions are largely related to agricultural and mining activities, windblown dust from construction areas and emissions from unpaved and paved roads.

TABLE 49—COLORADO $PM_{2.5}$ EMISSIONS—2002 AND 2018

Source category	Baseline 2002	Future 2018	Percent change
Point	6	85	1,404
Area	4,170	4,311	3
On-Road Mobile	.....	.....	.....
Off-Road Mobile	.....	.....	.....
WRAP Area O & G	.....	.....	.....
Road Dust	1,082	1,435	33
Fugitive Dust	13,401	11,679	−13
Windblown Dust	15,105	15,105	0
Anthropogenic Fire	253	169	−33
Natural Fire	1,948	1,948	0
Biogenic	.....	.....	.....
Total	35,964	34,732	−3

Overall, $PM_{2.5}$ emissions are expected to decrease 3%. Increases in road dust emissions are tied to population growth and vehicle miles traveled.

PM_{10}

PM_{10} is closely related to the same sources as fine soil emissions, but other activities like rock crushing and processing, material transfer, open pit mining, and unpaved road emissions can be prominent sources.

TABLE 50—COLORADO PM_{10} EMISSIONS—2002 AND 2018

Source category	Baseline 2002	Future 2018	Percent change
Point	21,096	26,828	27
Area	1,363	1,388	2
On-Road Mobile	794	917	15
Off-Road Mobile	.....	.....	.....
WRAP Area O & G	.....	.....	.....
Road Dust	8,930	11,826	32
Fugitive Dust	67,642	67,910	0
Windblown Dust	135,945	135,945	0
Anthropogenic Fire	51	32	−37
Natural Fire	5,973	5,973	0
Biogenic	.....	.....	.....
Total	241,794	250,818	4

Overall, PM_{10} emissions are expected to increase by 4% in 2018. Increases in coarse mass are seen in the fugitive dust category. The increase in PM_{10} from road dust is associated with population growth and increased vehicle miles traveled. Point source emissions are addressed by the State for BART and RP sources.

2. Consultation and Emissions Reductions for Other States' Class I Areas

40 CFR 51.308(d)(3)(i) requires that Colorado consult with another state if its emissions are reasonably anticipated to contribute to visibility impairment at that state's Class I area(s), and that Colorado consult with other states if those other states' emissions are reasonably anticipated to contribute to visibility impairment at its Class I areas. Colorado consulted with other states during ongoing participation in the WRAP while developing its SIP. Through the WRAP consultation process, Colorado has reviewed and analyzed contributions from other states that reasonably may cause or contribute to visibility impairment in Colorado's Class I areas and Colorado's impact on other states' Class I areas. The State held specific discussions with states that have a primary impact on Colorado Class I areas. These include California, Utah, Nebraska, Wyoming, New Mexico, and Arizona.

40 CFR 51.308(d)(3)(ii) requires that if Colorado emissions cause or contribute to impairment in another state's Class I area, Colorado must demonstrate that it has included in its RH SIP all measures necessary to obtain its share of the emission reductions needed to meet the progress goal for that Class I area. Section 51.308(d)(3)(ii) also requires that, since Colorado participated in a regional planning process, it must ensure it has included all measures needed to achieve its apportionment of emission reduction obligations agreed upon through that process. As we state in the RHR, Colorado's commitments to participate in WRAP bind it to secure emission reductions agreed to as a result of that process.

Colorado analyzed the WRAP PSAT modeling and determined that emissions from the State do not significantly impact other states' Class I areas. Colorado's largest visibility impacts are at Canyonlands National Park in Utah and Bandelier National Monument in New Mexico. Colorado's total nitrate and sulfate contributions represent 1.0% and 0.5%, respectively, of total haze at these Class I areas. The State determined this is not a meaningful level of contribution. Colorado accepted and incorporated the WRAP-developed visibility modeling into its RH SIP, and the State's RH SIP includes the controls assumed in the modeling. Colorado satisfied the RHR's requirements for consultation and included controls in the SIP sufficient to address the relevant requirements of the RHR related to impacts on Class I areas in other states.

We are proposing to find that the State has met the requirements for consultation under 40 CFR 51.308(d)(3)(ii) and 40 CFR 51.308(d)(3)(iii).

3. Mandatory Long-Term Strategy Requirements

40 CFR 51.308(d)(3)(v) requires that Colorado, at a minimum, consider certain factors in developing its long-term strategy (the long-term strategy factors). These are: (a) Emission reductions due to ongoing air pollution control programs, including measures to address reasonably attributable visibility impairment (RAVI); (b) measures to mitigate the impacts of construction activities; (c) emissions limitations and schedules for compliance to achieve the RPGs; (d) source retirement and replacement schedules; (e) smoke management techniques for agricultural and forestry management purposes including plans that currently exist within the state for these purposes; (f) enforceability of emissions limitations and control measures; and (g) the anticipated net effect on visibility due to projected changes in point, area, and mobile source emissions over the period addressed by the long-term strategy.

a. Reductions Due to Ongoing Air Pollution Programs

In addition to its BART and RP determinations, the State's long-term strategy contains other reductions due to ongoing air pollution programs. The State's long-term strategy contains both state only and federally enforceable programs. Some examples of these programs that are federally enforceable and the emission reductions they achieve include: (1) Oil and gas condensate tank control regulations for the Front Range region that have achieved approximately 52,000 tpy of VOC emission reductions by 2007 with additional projected reductions of 18,000 tpy by 2010 (Regulation No. 7); (2) existing industrial engine control regulations for the Front Range region that have achieved NO_X and VOC emissions reductions of approximately 8,900 tpy (Regulation No. 7); (3) PM_{10} emission reduction programs in PM_{10} maintenance areas throughout the State; and 4) fugitive dust control programs for construction, mining, vehicular traffic, and industrial sources state-wide (Regulation No. 1). The State has also adopted some of the federal NSPS and the New Source Review and PSD permit requirements for stationary sources. Additional information on ongoing air pollution programs is included in Chapter 9 of the State SIP.

b. Measures to Mitigate the Impacts of Construction Activities

Regulation No.1 *Particles, Smokes, Carbon Monoxide, and Sulfur Oxides* and Regulation No. 3 *Air Pollution Emission Notices—Permits* have requirements that pertain to controlling emissions from construction activity. EPA has approved both regulations into the Colorado SIP. Regulation No. 3 requires air pollution sources to file Air Pollutant Emission Notices with the State. It also requires that new or modified sources of air pollution, with certain exemptions, obtain preconstruction permits. Regulation No. 1 sets forth emission limitations, equipment requirements and work practices (abatement and control measures) intended to control the emissions of particles, smoke and sulfur oxides from new and existing stationary sources, including construction activities.

c. Smoke Management

Colorado addresses the requirements for smoke management in Regulation No. 9 *Open Burning, Prescribed Fire, and Permitting.* The intent of Regulation No. 9 is to prevent unacceptable smoke impacts, pertaining to both health and visibility. The rule applies to all open burning activity within Colorado, with the exception of agriculture open burning.[29] Section III.A of the regulation requires anyone seeking to conduct open burning to obtain a permit from the State before conducting a burn. Regulation No. 9 also contains a number of factors the State must consider in determining whether and, if so, under what conditions, a permit may be granted. Some of the factors the State must consider include: the potential contribution of such burning to air pollution in the area; the meteorological conditions on the day or days of the proposed burning; the location of the proposed burn and smoke-sensitive areas and Class I areas that might be impacted by the smoke and emissions from the burn; whether the applicant will conduct the burn in accordance with a smoke management plan or narrative that requires that best smoke management methods will be used to minimize or eliminate smoke impacts at smoke-sensitive receptors (including Class I areas); and that the burn will be scheduled outside times of significant visitor use in smoke-sensitive receptor areas that may be impacted by smoke and emissions from the fire.

The regulation requires all prescribed fire permitees to submit an application to the State. The State only grants a permit if the State's assessment demonstrates that under the prescribed meteorological conditions for the burn there will be no unacceptable air pollution, including visibility impacts. The regulation provides for the State to impose permit conditions necessary to ensure that the burn will be conducted to minimize the impacts of the fire on visibility and on public health and welfare. Permitted sources are also required to report actual activity to the State. Depending on the size and type of fire, reporting may be a daily requirement. At a minimum, permitted sources must report yearly to the State with information indicating whether or not there was any activity in the area covered by the permit and, if so, how many acres were burned.

Colorado inputs fire data into the WRAP Fire Emissions Tracking System (FETS). The FETS gives the State more precise information for future inventories and studies. The State commits in this SIP to continue administration of Regulation 9 as part of this LTS, and to input data into the FETS as long as it is operational.

d. Emission Limitations and Schedules for Compliance

The State has included the emission limitations and compliance schedules for those sources specifically identified for control in this RH SIP in Chapters 6 and 8, Regulation No. 3, Part F and Regulation No.7, Section XVII.E.3.a. For the BART sources, Regulation No. 3, section VI.A contains the emission limitations for each of the sources and provides that sources must comply as expeditiously as possible, but no later than five years from EPA approval of the SIP. For RP sources, Regulation No. 3, section VI.B, contains the emission limitations for each of the sources and provides that sources must comply no later than December 31, 2017. For the PSCO BART alternative, Regulation No. 3, section VI.C, contains the emission limitations and the compliance deadlines for sources covered by the PSCO BART alternative. Regulation No. 7, Section XVII.E.3.a contains the compliance schedule for RB RICE over 500 hp.

We are proposing to approve the emission limits and compliance schedules contained in Regulation No. 3, sections VI.A, VI.B, and VI.C.

e. Sources Retirement and Replacement Schedules

The State has included specific information on source retirement for those sources specifically identified for shutdown in its RH SIP. The State has identified the sources in the PSCO BART alternative that will shut down. Specifically, under the PSCO BART alternative, the following units will be retired: Arapahoe Unit 3 by December 31, 2013; Cherokee Unit 1 by July 1, 2012, Cherokee Unit 2 by December 31, 2011, Cherokee Unit 3 by December 31, 2016, and Valmont by December 31, 2017. The shutdown of the sources under the BART alternative is required by the RH SIP (see Chapter 6.4.3.7 of the SIP and Regulation No. 3, Part F, SectionVI.C). Under RP, PSCO Cameo Station and Black Hills Clark Facility Units 1 and 2 will be, or have already, shut down. The shutdown of these RP sources is required by the RH SIP (see Chapter 8.5.2 of the SIP and Regulation No. 3, Part F, Section VI.B). The State is assuming that all other stationary sources evaluated in the SIP will remain in operation through the end of this planning period.

The State is also assuming mobile source fleet turnover. For mobile sources, the turnover of the fleet from older, higher-emitting vehicles to newer, lower-emitting vehicles is captured in the emission inventory presented in section V.E.1 of this notice. The State developed the fleet turnover rate utilizing EPA-approved methodologies.

f. Enforceability of Colorado's Measures

Section 51.308(d)(3)(v)(f) of the RHR requires States to ensure that emission limitations and control measures used to meet RPGs are enforceable. In addition to what is required by the RHR, general SIP requirements mandate that the SIP must also include adequate monitoring, recordkeeping, and reporting requirements for the RH emission limits and requirements. (see CAA section 110(a)). As noted above, Chapters 6 and 8 of the SIP and Regulation No. 3, Part F, Sections VI.A, VI.B, and VI.C, specify BART, RP, and BART alternative emission limits and compliance schedules. The State is submitting Regulation No. 3, Part F, Section VI, as part of the RH SIP.

Regulation No. 3, Part F, Section VII, specifies monitoring, recordkeeping, and reporting requirements for BART, RP, and BART alternative units. The State is submitting Regulation No. 3, Part F, Section VII, as part of its RH SIP. Colorado worked closely with EPA in developing these requirements. For SO_2 and NO_X limits, Colorado has required

[29] The State has determined that agricultural burning is not a significant source of emissions related to regional haze impairment. For example, the State estimates that in 2004 only 503 tpy of PM_{10} were generated from agricultural burning in the entire State of Colorado. See Colorado TSD document ''Agricultural Burning in Colorado, 2003 and 2004 Inventories.''

sources to use continuous emission monitoring systems (CEMS) that must be operated and maintained in accordance with relevant EPA regulations, in particular, 40 CFR part 75 or 40 CFR part 60. For PM limits, Regulation No. 3 requires that sources perform testing in accordance with EPA approved test methods and that sources have a compliance assurance monitoring plan developed and approved in accordance with 40 CFR part 64. Regulation No. 3, Part F, Section VII, requires that sources keep relevant records for five years, and that sources report excess emissions on a semi-annual basis.

g. Anticipated Net Effect on Visibility Due to Projected Changes

The anticipated net effect on visibility due to projected changes in point, area, and mobile source emissions during this planning period is addressed in section V.D.3 of this notice.

Based on our analysis, we have determined the State is meeting the long-term strategy requirements under 40 CFR 51.308(d)(3)(v). EPA is proposing to approve the State's long-term strategy found in Chapter 9 of the SIP. In addition, EPA is proposing to approve Regulation No. 3, Part F, Section VI and Section VII.

F. Coordination of RAVI and Regional Haze Rule Requirements

Our visibility regulations direct states to coordinate their RAVI long-term strategy and monitoring provisions with those for RH, as explained in section IV.F above. Under our RAVI regulations, the RAVI portion of a state SIP must address any integral vistas identified by the FLMs pursuant to 40 CFR 51.304 (see 40 CFR 51.302). An integral vista is defined in 40 CFR 51.301 as a view perceived from within the mandatory Class I Federal area of a specific landmark or panorama located outside the boundary of the mandatory Class I Federal area. Visibility in any mandatory Class I Federal area includes any integral vista associated with that area. The long-term strategy must have the capability of addressing current and future existing impairment situations as they face the state.

Regulation No. 3, Part D, Section XIV provides FLMs the opportunity to certify whether an existing stationary source(s) is reasonably attributable to existing visibility impairment and potentially subject to BART and provides the State's review schedule for the RAVI long-term strategy. The EPA previously approved the State's 2004 RAVI long-term strategy as meeting the requirements of 40 CFR 51.306 (see 71 FR 64465). In order to coordinate the RH long-term strategy and the RAVI long-term strategy, the State submitted revisions to Regulation No. 3, Part D, Section XIV. The State amended Regulation No. 3, Part D, Section XIV.F as part of this SIP action to change the current three-year RAVI long-term strategy review cycle to a five-year cycle (as required by the RH Rule) to coordinate the RAVI and RH elements together as intended by the RH rule.

We propose to find that the RH SIP appropriately supplements and augments Colorado's RAVI provisions by updating the monitoring and long-term strategy provisions to address RH. We discuss the relevant monitoring provisions further below. We are also proposing to approve the revision to Regulation No. 3, Part D, Section XIV.F, to change the review period from three years to five years to coordinate with the five-year periodic review required by the RH Rule.

G. Monitoring Strategy and Other Implementation Plan Requirements

40 CFR 51.308(d)(4) requires that the SIP contain a monitoring strategy for measuring, characterizing, and reporting RH visibility impairment that is representative of all mandatory Class I Federal areas within the state. This monitoring strategy must be coordinated with the monitoring strategy required in 40 CFR 51.305 for RAVI. As 40 CFR 51.308(d)(4) notes, compliance with this requirement may be met through participation in the IMPROVE network. 40 CFR 51.308(d)(4)(i) further requires the establishment of any additional monitoring sites or equipment needed to assess whether RPGs to address RH for all mandatory Class I Federal areas within the state are being achieved.

Consistent with EPA's monitoring regulations for RAVI and RH, Colorado indicates in Chapter 3 of the RH SIP that it will rely on the IMPROVE network for compliance purposes, in addition to any additional visibility impairment monitoring that may be needed in the future. The IMPROVE monitors at the Colorado Class I Areas are described in section IV.B of this notice.

Section 51.308(d)(4)(ii) requires that Colorado establish procedures by which monitoring data and other information are used in determining the contribution of emissions from within Colorado to RH visibility impairment at mandatory Class I Federal areas both within and outside the state. The IMPROVE monitoring program is national in scope, and other states have similar monitoring and data reporting procedures, ensuring a consistent and robust monitoring data collection system. As 40 CFR 51.308(d)(4) indicates, Colorado's participation in the IMPROVE program constitutes compliance with this requirement.

Section 51.308(d)(4)(iv) requires that the SIP provide for the reporting of all visibility monitoring data to the Administrator at least annually for each mandatory Class I Federal area in the state. To the extent possible, Colorado should report visibility monitoring data electronically. Section 51.308(d)(4)(vi) also requires that the SIP provide for other elements, including reporting, recordkeeping, and other measures, necessary to assess and report on visibility. We propose that Colorado's participation in the IMPROVE network ensures that the monitoring data is reported at least annually and is easily accessible; therefore, such participation complies with this requirement. IMPROVE data are centrally compiled and made available to EPA, states and the public via various electronic formats and Web sites including IMPROVE (*http://vista.cira.colostate.edu/improve/*) and VIEWS (*http://vista.cira.colostate.edu/views/*).

Section 51.308(d)(4)(v) requires that Colorado maintain a statewide inventory of emissions of pollutants that are reasonably anticipated to cause or contribute to visibility impairment in any mandatory Class I Federal area. The inventory must include emissions for a baseline year, emissions for the most recent year for which data are available, and estimates of future projected emissions. The state must also include a commitment to update the inventory periodically. The State's emission inventory is discussed in section V.E.1 above. Chapter 3 of the SIP states that Colorado will update its portion of the regional inventory on the tri-annual cycle as dictated by the Air Emissions Reporting Rule in order to track emission change commitments and trends as well as for input to regional modeling exercises.

Section 51.308(d)(4)(vi) requires that states provide for any additional reporting, recordkeeping, and measures necessary to evaluate and report on visibility. The State has committed to provide any additional reporting, recordkeeping and measures necessary to evaluate and report on visibility but has concluded that it cannot identify a need for any specific commitment at this time. We agree with the State's conclusion that no specific additional measures are necessary at this time.

We propose to find that Colorado has satisfied the requirements in 40 CFR 51.308(d)(4).

H. Consultation With FLMs

Class I areas in Colorado are managed by either the U.S. Forest Service (FS) or the U.S. National Park Service (NPS). Although the FLMs are very active in participating in the regional planning organizations, the RHR grants the FLMs a special role in the review of the RH SIPs, summarized in section IV.H, above. The FLMs and the state environmental agencies are our partners in the RH process. Under 40 CFR 51.308(i)(2), Colorado was obligated to provide the FS and the NPS with an opportunity for consultation, in person and at least 60 days prior to holding a public hearing on the RH SIP. In development of its 2010 RH SIP submittal, Colorado met with the FS and NPS for consultation on June 2, 2010, August 12, 2010, and October 5, 2010.

Section CFR 51.308(i)(3) requires that Colorado provide in its RH SIP a description of how it addressed any comments provided by the FLMs. The FLMs formally commented on the 2010 proposed SIP in November and December of 2010. The NPS and FS provided support for the modeling approach used by the State in the BART determinations and complimented the State on thorough BART and RP analyses and area source evaluations. The FLMs also presented recommendations that the State reevaluate costs and emission limits for some of the BART and RP sources. Chapter 2.1 of the State's SIP provides more detailed information on the State's response to FLM comments.

Lastly, 40 CFR 51.308(i)(4) specifies the RH SIP must provide procedures for continuing consultation between the state and FLMs on the implementation of the visibility protection program required by 40 CFR 51.308. This includes development and review of implementation plan revisions and five-year progress reports and the implementation of other programs having the potential to contribute to impairment of visibility in mandatory Class I Federal areas. In Chapter 10 of the SIP, the State has included a commitment that it will provide the FLMs an opportunity to review and comment on SIP revisions, the five-year progress reports, and other developing programs that may contribute to Class I visibility impairment. Colorado will afford the FLMs with an opportunity for consultation in person and at least 60 days prior to holding any public hearing on a SIP revision. The FLM consultation must include the opportunity to discuss the FLMs' assessment of visibility impairment in each federal Class I area and to provide recommendations on the development and implementation of the visibility control strategies.

I. Periodic SIP Revisions and 5-Year Progress Reports

In accordance with the requirements listed in 40 CFR 51.308(g), Colorado commits in Chapter 10 of its SIP to submit a report on RP to EPA every five years following the initial submittal of the SIP. That report will be in the form of an implementation plan revision. The State's report will evaluate the progress made towards the RPGs for each mandatory Class I area located within Colorado and in each mandatory Class I area located outside Colorado, which have been identified as being affected by emissions from Colorado. The State will also evaluate the monitoring strategy adequacy in assessing RPGs.

Based on the findings of the five-year progress report, 40 CFR 51.308(h) requires a state to make a determination of adequacy of the current implementation plan. The State must take one or more of the actions listed in 40 CFR 51. 308(h)(1) through (4) that are applicable at the same time as the state submits a five-year progress report. Colorado commits in Chapter 10 of the SIP to determine the adequacy of the current SIP at the same time a five-year progress report is due.

Section CFR 51.308(f) requires a state to revise and submit its RH SIP to EPA by July 31, 2018, and every ten years thereafter. The State commits in Chapter 10 of the SIP to provide this revision and to evaluate and reassess elements required under 40 CFR 51.308(d), taking into account improvements in monitoring data collection and analysis, and control technologies.

VI. EPA's Proposed Action

EPA is proposing to approve a SIP revision submitted by the State of Colorado on May 25, 2011 that addresses RH. EPA is proposing to determine that the plan submitted by Colorado satisfies requirements of the CAA and our rules under 40 CFR 51.308 that require states to prevent any future and remedy any existing man-made impairment of visibility in mandatory Class I areas. We are proposing to approve the State's RH SIP, including revisions submitted as part of the RH SIP to:

- Regulation No. 3, Part F, Section VI and Section VII.
- Regulation No. 3, Part D, Section XIV.F.
- Regulation No. 7, Section XVII.E.3.a.

VII. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations (42 USC 7410(k), 40 CFR 52.02(a)). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this proposed action merely approves state law as meeting Federal requirements; this proposed action does not impose additional requirements beyond those imposed by state law. For that reason, this proposed action:

- Is not a ''significant regulatory action'' subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 USC 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 USC 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 USC 272 note) because application of those requirements would be inconsistent with the CAA; and,
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this rule does not have Tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the State, and EPA notes that it will not impose substantial direct costs on Tribal governments or preempt Tribal law.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Intergovernmental relations, Nitrogen dioxide, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

Dated: March 8, 2012.

James B. Martin,

Regional Administrator, Region 8.

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S. 1134/P.L. 112–100
St. Croix River Crossing Project Authorization Act (Mar. 14, 2012; 126 Stat. 268)

S. 1710/P.L. 112–101
To designate the United States courthouse located at 222 West 7th Avenue, Anchorage, Alaska, as the James M. Fitzgerald United States Courthouse. (Mar. 14, 2012; 126 Stat. 270)

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